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U.S. Army Materiel Command

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ANNUAL HISTORICAL REVIEW

FY85



June 1987

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U.S. ARMY MATERIEL COMMAND

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FISCAL YEAR 1985
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Prepared by

Historical Office

Headquarters, U.S. Army Materiel Command

June 1987

APPROVED:



DONALD R. WILLIAMSON
Brigadier General, USA
Deputy Chief of Staff
for Readiness

PREFACE

This Fiscal Year 1985 Annual Historical Review of the US Army Materiel Command covers activities of the AMC Headquarters in pursuit of its mission on behalf of the US soldier during the twenty-third year of its existence. It is a link in the continuing record of Army men and women, uniformed and civilian, who pursue excellence in the equippage and maintenance of their country's land forces. The review serves as the official history of the Command, a source of information and conclusions on current topics that may be used by management, perhaps years hence, in reaching operational decisions. For just as preservation of memory tells us where we have been, history serves to define our present position and gives us some steerage in where we are headed.

It is the aim of the AMC history program that the histories it publishes accurately depict the events they cover and the issues and concerns that were addressed. To the extent that it is successful, products like this AHR may be used by newly-assigned personnel for orientation and by future historians in preparation of other more comprehensive historical accounts.

The history was prepared by the Headquarters AMC Historical Office with the assistance of personnel from each of the headquarters staff elements and project manager offices. The historical accounts prepared by these coordinators were submitted with appropriate background documentation to the History Office. The submissions were used extensively by the Historical Office historians in the preparation of the narrative, buttressed by such further research as is reflected in the footnotes, including interviews with a number of key staff personnel that ranged from brief telephonic contacts on specific points of inquiry to extended, wide-ranging interviews that were often preserved by tape recording.

The preparation of the history was a team effort. The team leader was Dr. Robert Darius, who planned and coordinated the project. The major portion of the history was written by Dr. Herbert Leventhal, who covered the topics of materiel acquisition, material readiness, force modernization, and product manager activities. He was assisted by Ms. Martha Crawley, who developed materials on AMC chemical and nuclear activities; Mr. Thomas Mani, who prepared the chapter on security assistance; and by Mr. Marcel Coppola and Dr. Charles Johnson, who combined in authoring the year's coverage of AMC's resource and personnel management. Their work is reflected in the Command and Management chapter, which covers the major themes of the year in microcosm.

The manuscript was edited by Mrs. Guyanne Parker with the assistance of Mr. Thomas Mani. Ms. Dianne Alexander prepared the auxiliary materials and processed the manuscript for printing.

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LTG L. F. Skibbie
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Chief of Staff



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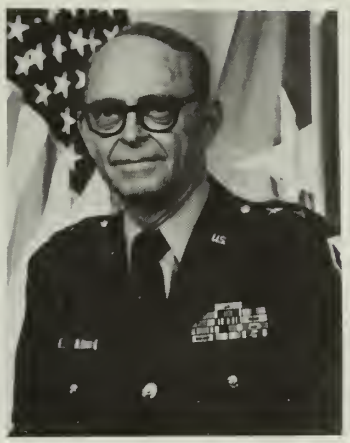
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US ARMY MATERIEL COMMAND
ANNUAL HISTORICAL REVIEW
FISCAL YEAR 1985

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CHAPTER I (U)

RESOURCES MANAGEMENT (U)

Organization and Mission (U)

(U) As result of the Headquarters AMC reorganization on 19 August 1984, the Comptroller Directorate was redesignated the Deputy Chief of Staff for Resource Management (DCSRM). This directorate consisted of 237 civilians and 7 military. The redesignation resulted in the loss of the Management Review and Analysis mission and the addition of headquarters Budget, Manpower, Force Development, Program Analysis and Evaluation, Mission and Organization, Contract Cost Management, DRIS, Family Housing Management Account (FHMA) and Capital Investment missions.

(U) A subsequent reorganization in May 1985 resulted in DCSRM gaining the additional missions of Stock Fund, Conventional Ammunition Working Capital Fund (CAWCF), Procurement Execution and RDTE Execution and losing the Mission and Organization mission. The DCSRM's authorized staffing at close of FY85 was 407 civilians and 20 military.

(U) The general mission of DCSRM is to achieve effective financial and manpower resource management throughout AMC, and to maintain operational control over the AMC Management Engineering Activity located at Redstone Arsenal, Alabama. The DCSRM is responsible for financial resource determination, financial control, fund accuracy, cost analysis, Planning, Programming and Budgeting System (PPBS), internal review, manpower management, productivity management, financial systems, and career programs 11 and 26.

(U) During FY85 the DCSRM established a Programs and Projects Office to partially fill the gap created by the transfer of the Management Review and Analysis Division to the Deputy for Management Analysis. On 1 December 1985, a Systems Management Division was established to convey to the resource management community the clear intent of DCSRM to focus on "productivity through automation." In FY85, DCSRM initiated eight financial management initiatives which are addressed in the sections that follow. They are: Obligation Tracking System; Management Decision Packages (M-DEP); Zero Base Budgeting (ZBB); Consolidation of PARR/COB/ZBB; Implementation of Program Integration Capabilities (IPIC); Inflation Tracking; RAM-D Tracking Wedge; and Savings Tracking.[1]

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[1] DCRM Historical Submission, FY85.

Programs and Projects Office (U)

(U) The Programs and Projects Office was formally established on 15 April 1985 to partially fill the gap created by the transfer of the Management Review and Analysis Division (28 manpower spaces) in the August 1984 headquarters restructuring. Several functions and a significant level of associated workload that had been performed by this division were retained by the DCSRM without resources, and for the first two quarters of FY85, the most critical were performed as additional duties by individuals scattered throughout the DCSRM without regard to existing functional assignments. This approach was discarded in favor of the efficient recentralization of those management analysis functions that involved assigned AMC-wide resource management functions, and those necessary for the internal operation of the DCSRM.

(U) Four manpower authorizations were transferred from other DCSRM elements to establish the Programs and Projects Office. The major functions performed in support of AMC-wide resource management involve the Resource Management Executive Workshops (RMEW) and the Resource Management Evaluation Surveys (RMES). The remaining major functions support the internal needs of the DCSRM, which include providing management analysis in the areas of AMC Directions, AMC Review and Analysis, and AMC Internal Controls Programs, the analysis of DCSRM's missions, functions, organizations and policies, as well as the effectiveness of its management processes and operations.[2]

Systems Management Division (U)

(U) The Systems Management Division was established on 1 December 1985 in order to convey the clear management intent to focus on "productivity through automation" in the resource management community.

Obligation Tracking System (OTS) (U)

(U) OTS was established to provide a communication network for the reporting of planned versus obligation data from the MSCs to HQ AMC. The reporting involved was for five major appropriation categories: Procurement Appropriations (PA); Research, Development Test and Evaluation (RDTE); Operations and Maintenance, Army (OMA); Wholesale Army Stock Fund (ASF); and Conventional Ammunition Working Capital Fund (CAWCF). Based on MSC input, the Flash Report of AMC FY86 obligations could be automatically produced. The system provided a means of electronically reporting the major planned contract awards, slippages, and reforecast dates. The system used micro-computers at each MSC and headquarters, and a computer time sharing service for the transmission of data files.

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2 Programs and Projects Office Historical submission, FY85.

Automated Financial Entitlements System (AFES) (U)

(U) The Automated Disbursing and Automated Travel System were successfully tested at Aviation Systems Command (AVSCOM) and Red River Army Depot (RRAD) respectively. The successful prototype of these two systems constituted Phase I of a comprehensive AFES. Phase II of the AFES would introduce the Automated Commercial Accounts module and Phase III would bridge the AFES to the Standard Army Civilian Payroll System-Redesign (STARCIPS-R). When fully implemented, AFES was expected to perform the following functions:

Automate routine calculations in the disbursing and travel functions, as well as record and summarize cash and check payments and individual cashier and cash control officer transactions.

Complete, compute and print all data for travel vouchers, produce a trip summary report, letter of indebtedness and a record of travel payments.

Maintain and update all disbursing/travel daily and monthly management reports.

Process all debts owed to or by commercial concerns to the Government.

Provide the check cutting capability for STARCIPS-R.

Program and Budget System (U)

(U) DCSRM proposed to design a centrally-administered resource management data base at HQ AMC to integrate the programming and budgeting processes. In support of that effort, a Program and Budget Functional Coordinating Group (PBFCG) was established at the direction of the Resource Management Systems Review Committee (RMSRC) in accordance with AMC-R 18-17, Automatic Data Processing (ADP) Systems Configuration Management.

(U) In an initial planning meeting of the PBFCG held at HQ TACOM on 25 April 1985, a prototype automated program and budget system which was being developed at TACOM, using a FOCUS data base management software, was reviewed as a possible point of departure for developing an AMC-wide Standard Programming and Budgeting System. Following this meeting the project and charter were approved.

(U) In a subsequent meeting of the PBFCG at HQ AMC on 23-24 July 1985, the TACOM system was discussed and found to be adequate, when modified, to satisfy the various commands' specific requirements. In addition, PBFCG recommended the establishment of a working group, consisting of a representative from HQ AMC, CECOM, MICOM, and TACOM to develop milestones for a standard AMC Program and Budget System, draft documentation to comply with automation management regulations, and prepare a strategy for implementing the automated system; such as contract, in-house or a combination of both.

AMC Automated Manpower Management Information System (AAMMIS) (U)

(U) During FY85 a briefing for developing a standard manpower system was presented to the RMSRC. The RMSRC approved the concept and a Charter for the Manpower Systems Functional Coordinating Group (MSFCG) was established. The MSFCG consisted of members from HQ AMC major subordinate commands, TMDE and three installations (Tooele Army Depot, Rock Island Arsenal and White Sands Missile Range). The primary function of this group was to direct development of a standard AMC manpower management system. By 30 September 1985, a draft functional description had been developed, potential system interfaces, data elements and data definitions were identified.

(U) AAMMIS would be a vertical, on-line, interactive standard DBMS for the force development function and would operate at HQ AMC, MSCs and installation and activity/field (I/FOA) element levels. The system would provide automation of force development functions not included in the Vertical Force Development Management Information System (VFDMIS). The major functions to be included in AAMMIS were: Requirements Determination and Program/Budget; Allocation, Accounting and Control; and Utilization, Strength Reporting, and Qualitative Management.[3]

Internal Review and Audit Compliance Division (U)

(U) Summary of Reviews. The Internal Review Audit Guide No. 84-1 - Materiel Receipts Under Fast Pay Procedures was a summary of conditions noted by ten field IRAC offices responding to the guide. The 10 audits included a review of 1120 fast pay purchase orders valued at approximately $3 million. Receiving documentation was not available to either confirm or refute receipt of material for 67 fast pay purchase orders. For 12 purchased orders processed by two AMC activities, it was determined that $24,184 of materiel was not received from contractors demonstrating the need for improvement of internal controls over receipt documentation for confirming fast pay direct deliveries. Recent revision of the OMB Circular A-125, "Prompt Payment", restricts the use of fast pay procurements and mandates Government-wide controls.

(U) Review of Sponsorship of Conferences. The review was made to determine HQ AMC staff elements compliance with DARCOM-R 1-12, "Sponsorship of Conferences and use of the DESCOM Conference Site Selection Model." IRAC determined that improvements were needed in the processes governing the approval and management control of conferences. Recommendations were made to change DARCOM-R 1-12 to require improved controls in the documentation and approval of conferences. In addition, recommendations were also made regarding the system development of a new conference site selection model.

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[3] Systems and Management Historical submission, FY85.

(U) Audit of AMC Corporate Fitness Program. An audit was initiated to review action taken during the preaward phase of the program. An evaluation of the contractor's proposed cost had not been obtained from an appropriate external audit activity. There was a major difference between the AMC cost estimate and the contractor's proposed cost. IRAC recommended a review of the contractor's pricing proposal be obtained from an appropriate external audit activity.

(U) Review of the AMC Command Morale Support Fund (CMSF). The intent of the review was to verify AMC Command Morale Support Fund account balances by testing transactions and other checks to determine the accuracy and propriety of the fund's operations. IRAC determined that a financial audit of the fund was not required. Beginning in FY85, all recorded financial transactions concerning the fund were physically moved to the AMC Nonappropriated Fund Central Accounting Office, Red River Army Depot. One operational deficiency cited was that AMC CMSF did not meet semi-annually as directed by HQDA. In response to the audit, DCSPER disestablished the Command Morale Support Fund Council on 31 May 1985.

(U) Audit of Corrective Action on Internal Control Material Weaknesses. The review was made to verify that necessary and adequate measures had been taken to complete planned corrective actions. Twenty-four material weaknesses, from nine Deputy Chief's of Staff, reported to AMC's 1984 Annual Assurance Statement were reviewed. Corrective action had been completed on seven material weaknesses. Corrective action was progressing satisfactorily on twelve weaknesses and additional action was needed on five weaknesses. Additional action was required due to changes in personnel or restructuring of efforts, emphasis on some corrective action. Emphasis on some corrective action had declined or become less clearly focused. Responsible points of contact for the program, in several cases, were not familiar with the status of corrective action. It was recommended that additional emphasis be given to ensure established milestones were met.

(U) Review of Contingency Funds of the Secretary of the Army. Initiated at the request of the Contingency Fund Custodian, the audit was made to determine compliance with AR 37-47, to evaluate the internal controls and to ascertain the efficiency and effectiveness of operations in controlling and maintaining the contingency funds allocated to HQ AMC. Recommendations were made to ensure that all requests for funds were approved in advance; consumable items were not purchased in excess of function requirements and an inventory maintained of alcoholic beverages for official functions; funds were provided on a fund cite basis when hosted outside HQ AMC; SF1034s were prepared and certified when submitting documentation for payment; quarterly reconciliations were made with APG and copies obtained of paid vouchers for all FY84 functions not on file.

(U) Validation of Consolidation and Containerization Point In-House Costs at New Cumberland Army Depot. This review, based on a Special Request from the DESCOM commander, was performed to evaluate the feasibility of the cost savings reported by NCAD. The review

showed that the cost savings were reasonable; however, there were two unresolved issues. Due to the short suspense, the areas of the statement of work and labor and production reporting were not reviewed.

(U) Audit of the Evaluation of Operating Accounting Systems. The review was made to determine the adequacy of the evaluations made of AMC's operating accounting systems. Twenty-five operating accounting systems were reported in last years annual report to the Assistant Comptroller of the Army (ACOA) and the Secretary of the Army. Internal Review Offices audited eight of the 25 operating systems to determine if evaluations were made in accordance with ACOA guidance. It was found that of the eight operating accounting systems reviewed, six had the evaluation made as required by the ACOA. However, only two of the six systems evaluated were considered to have adequate documentation supporting the evaluation. Two system proponents, as of the time of the audit, had not accomplished the evaluation because they were unsure of their evaluation responsibilities. There was inadequate documentation because system proponents did not properly record their evaluations with workpapers and detailed explanations as required by ACOA instructions. Action was taken by subordinate commands to correct problems identified during the course of the reviews. Actions included obtaining supporting documentation and complying with ACOA instruction. Also, HQ AMC Finance and Accounting Division was to prepare a plan of action to be performed during FY86, which would ensure that evaluation of all AMC operating accounting systems were completed and documented adequately.

(U) Audit of Special Mission Funds. Two reviews were done to determine if anti-deficiency violations investigations were warranted. The circumstances surrounding these situations were reviewed and corrective funding adjustments were recommended to the HQ Finance and Accounting Office.

(U) Audit Guide - Computer-Assisted Reconciliation of Unliquidated Obligations (Installation Supply). A guide was prepared by the MICOM IRAC Office for use by the AMC field activities in developing computer-assisted techniques for their audits. The widespread automation of record keeping necessitated the development and use of these techniques for detecting errors and potential fraud. The guide was furnished to all AMC internal review offices.

(U) Use of Defense Property Disposal Service. An audit was conducted to evaluate the adequacy of management accountability and control of items retrieved from Defense Property Disposal Office. The audit was conducted at twelve subordinate activities. The audit showed that AMC was generally making good use of the PDO and accountability and control of items retrieved was adequate.

(U) Acquisition and Procurement. The Audit Trends and Management Internal Control Review Guide Supplement was prepared as part of a continued effort to provide managers with a useful tool for conducting internal control reviews. Lessons learned that surfaced subsequent to the publication of the Acquisition and Procurement

manager's guide in October 1982, were incorporated in this supplement. The supplemental information included small purchases, contract administration, sole-source contracts and contractor responsibility.

(U) Manager's Guide - Foreign Military Sales (FMS). This guide provides managers with a synopsis of audit trends in the FMS area. It is not an all inclusive document on FMS; however, it does provide a historical view of areas defined as sensitive by the audit community which required redefinition, redesign and rethinking in support of the Army's FMS program. The guide included a checklist to assist managers in evaluating their policies and procedures regarding the reported problem area.

(U) Managers Guide - Travel and Transportation. This guide provides managers a synopsis of audit trends in the travel and transportation area. A key part of the guide is a checklist which is designed to help managers to ask pertinent questions that should be addressed within their organizations in light of lessons learned from audit reports in these areas. In addition, the checklist could be used as a guide for conducting internal control review.

(U) Defense Contract Audit Agency (DCAA) Report Follow-Up System. AMCRM-IA developed an automated data base to track the process of dispositioning DCAA audit reports. The data base showed status of open reports, including target dates for disposition. It was also used to help identify problem areas and verify semi-annual status reports prior to release to DA.

(U) Audit Alert Network: Access to Tape Libraries. During an audit of Computer Operation, USAAA found that access to tape libraries was not controlled. Some tapes were stored outside the libraries, tapes were not labeled and inventories were not made as frequently as required. This finding was disseminated to various commands with AMCCOM, CECOM, DESCOM, TACOM, and TECOM reporting to have the similar problem at their commands.

(U) Unobligated Funds/Contingent Liabilities. A USAAA audit of the unobligated funds/contingent liabilities for the procurement appropriations disclosed that excess funds were not identified and reprogramed on a timely basis. Reviews made by comptroller personnel were not in sufficient detail to ensure that the rationale and computations used to estimate contingent liabilities were adequate. Although USAAA found this problem at TACOM and AMCCOM, the commands which were queried through the Audit Alert Network all reported a negative reply.

(U) Daily Audit Activity Report. As part of the Command Initiative to keep the CG informed of what was happening in the audit arena, a report (daily) was initiated for his use. The Daily was distributed to the Deputy Commanding Generals (DCG) as well as other Command Group personnel. The CG and DCGs used the daily as a vehicle for querying the functional offices as well as the office of origin for insight into problems.

Cost Analysis Division (U)

(U) Extensive effort was placed on review and validation of weapon system cost estimates including Baseline Cost Estimates, Independent Cost Estimates, and Cost and Operational Effectiveness Analyses. Input and support were provided for the Operational Baseline Cost Estimate; Cost Research; Total Risk Assessing Cost Estimate for Production; Reliability, Availability, Maintainability and Durability (RAM-D); the Cost Analysis Workload Survey; the Cost Analysis Personnel Profile; and the Economic Analysis Pamphlet.

Operational Baseline Cost Estimate (OBCE) (U)

(U) Plans were continued for implementation of an automated OBCE throughout AMC. An AMC Cost Analysis Chiefs' meeting was held at the Missile Command, Redstone Arsenal, Alabama on 15-16 November 1984. The Cost Analysis Chiefs reviewed the OBCE program, command-wide implementation plans, and status of each. Hardware and OBCE software were demonstrated and future program enhancements were proposed and discussed. Strategies for accelerated acquisition (including applicability review of the Army microcomputer-buy hardware) were considered and discussed with other AMC organizations, HQDA, and personnel of the Office of the Assistant Secretary of the Army for Financial Management (ASA(FM)). In September 1985, a System Decision Paper and acquisition approval request package was completed by the Deputy Chief of Staff for Resource Management and the Deputy Chief of Staff for Information Management for submission to the Comptroller of the Army for review and approval by the ASA(FM).

RAM-D Funding Wedge (U)

(U) HQDA directed an initiative to both reduce RAM-D driven Operating and Support (O&S) costs by 50 percent and at the same time reduce mission capable (NMC) rates by 50 percent by FY91. Subsequent HQDA guidance included 50 percent reduction of support manpower as an additional goal of the program. The RAM-D reduction initiative would be applied to ten designated weapon systems. A concept paper for capturing RAM-D O&S savings and for monitoring those savings through the budget process was integrated into the AMC guidance. The ten PMs selected for RAM-D reduction were directed to develop an operating and support cost baseline and to identify savings for each weapon system in accordance with the instructions.

Cost Research (U)

(U) The FY83 project which developed a methodology to predict first unit production cost in conjunction with CECOM was completed. Two FY84 contractor supported Cost Research projects for developing data base structuring and data base expansion, in conjunction with AVSCOM and ERADCOM (LABCOM) respectively, were also completed. Four FY85 projects developing missile system data base related products were completed in conjunction with MICOM. At the end of FY85, efforts were

underway at AMCCOM, CECOM and TACOM to develop new or extended data bases (i.e., Armament R&D, Test Program Sets (TPS), and Wheeled and Tracked Vehicles). Efforts on two software cost estimating projects were on-going at AVSCOM and CECOM. A project on production tooling was also underway at CECOM. The end product for each on-going project was projected to be delivered during FY86. A prioritized list of nine AMC Cost Research projects for FY86 was submitted to HQDA requesting approval and funding.

Operating and Support Cost Management Information System (O&SCMIS)(U)

(U) On 15 February 1985, management responsibility for the O&SCMIS project was transferred to HQDA.

Total Risk Assessing Cost Estimate for Production (TRACE-P). (U)

(U) TRACE-P was a method of estimating and budgeting the funds required for the technological risks during production. Production risk funds were appropriated in FY85 for the M833 Projectile and the M1A1 Abrams Tank. Production risk funds were in the FY86 President's Budget for the M833 and the Remotely Piloted Vehicle (RPV). The FY87-91 POM contained production risk funds for the RPV. During FY85, estimates were prepared for the PLRS-JTIDS HYBRID (PJH), the Simplified Test Equipment Expandable (STE-X), and the Intermediate Forward Test Equipment (IFTE). However, because of funding reductions, their TRACE-P requirements were not included in the FY87-91 POM.

(U) Cost Analysis Award. The AMC Cost Analysis Award, established on 26 March 1981, is awarded annually by the Commanding General, AMC, on an individual or group basis for outstanding accomplishments by AMC personnel involved in the Cost Analysis Program. One or more awards could be granted for excellence in Cost Estimating/Cost Analysis, Review and Validation, Research, Methodology and Data, and Economic Analysis.

(U) AMC Cost Analysis Workload Survey. Each MSC Cost Analysis Office (CAO) was surveyed to assess the professional manyears available and the percentage of the time spent on activities within their functional area for the period 1 October 1983 to 30 September 1984. The results of the survey were summarized to provide a command assessment of workload emphasis, and a compendium of the workload data was distributed to each MSC in April 1985.

(U) AMC Cost Analysis Personnel Profile. A consolidated AMC Cost Analysis Personnel Profile was prepared with data as of 1 October 1984. The profile presented a compilation of each CAO and PMO (having cost analysis positions) showing professional spaces and total TDA spaces in the CAOs, professional spaces in the PMOs, and distribution of spaces by job series, grade, and female/minority representation. Upon completion, the profile was distributed to all offices represented in the report.

(U) Economic Analysis Pamphlet. An AMC pamphlet entitled "Economic Analysis: Concepts and Methodologies," dated July 1985, was distributed throughout the command. The document addressed the economic analysis process, cost estimating, benefit analysis, economic analysis techniques, format preparation and provided the user with a sample economic analysis. A steering committee was chaired by Cost Analysis within the DCSRM while AMCCOM was designated the lead command for coordination and preparation of the document.

(U) Warranties. Section 2403, Title 10 of the United States Code, required that DOD obtain certain types of warranties in contracts awarded after 1 January 1985, for the acquisition of weapon systems. There was an exemption provision that a waiver could be granted by showing that the warranty was not cost effective. The effort was initiated by AMC and resulted in a warranty cost effectiveness model. This model was briefed by AVSCOM to the DCSRM and Production Assurance and Test during September 1985. The model was approved for finalization and distribution as an available AMC tool for warranty evaluation. A warranty model user's guide was expected to be completed by the end of CY85.

(U) Production Base Support (PBS). A total of 161 PBS projects (including sub-projects) submitted for the FY87 Budget were reviewed relative to the proper application of supporting economic analysis (EA) documentation. Of the 161 projects, 88 percent (141) met the requirements of AR 11-28 and of those, 99 percent (139) were found to have acceptable EA application. The projects found deficient were returned to the submitting directorate for initiation of corrective action and ultimate resolution was achieved.

(U) Cost Analysis for Decision Making (CADM). ALMC presented four resident CADM classes during FY85, training 57 AMC employees. This office provided extensive review and coordination of student acceptance into the course in order to assure maximum training of Cost Analysis personnel.

(U) Cost Estimate for Alternative Decision Packages (ADPs). This effort was initiated in FY84 to support the FY 87-91 program objective memorandum (POM). All cost estimates planned for completion by 31 October 1984 were provided to DA on schedule.

Baseline Cost Estimates (BCE) and BCE Reassessments (U)

(U) BCEs normally were prepared by PM offices and reviewed and coordinated by the cost analysis offices at MSCs and HQ AMC. BCEs formed the basis for the audit trail/track throughout the life cycle of a weapon system. Reassessments were made at major decision points and tracked to the initial BCE. The following systems required BCEs or reassessments during FY85:

Completed

RPV	STINGER	AHIP
PERSHING II	BLACK HAWK	AAH
CH-47	HELLFIRE	MLRS BASIC
PATRIOT	M1/M1A1	ADDS
TOW II	SHORAD C2	AAWS
MSE	GUARDRAIL	CUCV
QUICKFIX	AFATDS	BFVS
TRAILBLAZER	SINCGARS	MCS
SGT YORK	SCOTT	HEMTT
COPPERHEAD	HMMWV	

In Process

LHX
MLRS/TGW
ATACMS
JSTARS
NAVSTAR
SCOTT
GPS
MCS

Independent Cost Estimates (ICE) (U)

(U) DOD policies governing the materiel acquisition process required an ICE for each major weapon system undergoing a milestone review by the Defense Systems Acquisition Review Council (DSARC). Additionally, selected systems required an ICE for systems undergoing a review by the Army Systems Acquisition Review Council (ASARC). The ICE was used to assess the reasonableness of the project manager's estimate of the cost resources required to complete the program. ICE activity during FY85 included the following systems:

Completed	In-Process
MSE	SCOTT
AHIP	SHORAD C2
PERSHING II	LHX
PATRIOT	ATACMS
AAH	MLRS-TGW
TOW II	GPS
AAWS	ADDS
BLACK HAWK	
HELLFIRE	
SHORAD C2	

MCS
SCOTT
M1/M1A1
COPPERHEAD
SINCGARS
AFATDS
ADDS
BFVS
JSTARS

Cost and Operational Effectiveness Analyses (COEA) (U)

(U) Coordination with Comptroller of the Army, TRADOC, MSCs, and the PM offices was required for the following COEAs:

Completed	In-Process
Light Anti-Armor System	Anti-helicopter Study
Elevated Target Acq. Systems	LHX
MLRS-SADARM	JATM
AAWS-M	TEXS
AAWS	ATACMS
BFVS	SHORAD C2
SADARM	JSTARS
M9 ACE	LADS
MELIOS	CIS
BRAT	AGS
ETAS	GPS
PLS	
120mm Mortar	

Selected Acquisition Reports (SAR), Unit Cost Reports (UCR), Supplemental Contractor Cost Reports (SCCR) and Defense Acquisition Executive Summary Reports (DAES) (U)

(U) These reports were standard, comprehensive, summary status reports on major defense systems, prepared for management within the DOD and for submission to Congress and other government agencies. They were required for all programs designated as major defense systems by the Secretary of Defense and summarized estimates of technical schedules, quantity, and cost information. They were normally prepared by the project manager offices and reviewed and coordinated by the major subordinate command cost analysis offices and HQ AMC. The following major systems were included in the reporting during FY85:

PERSHING II
STINGER
BLACK HAWK
AHIP
PATRIOT
MLRS
HELLFIRE
BFVS
ADDS
SHORAD C2
155mm HIP
M1/M1
AAH
CH-47
TOW II
RPV
ASAS
SINCGARS
COPPERHEAD
SGT YORK
JTIDS

ASARC/DSARC Reviews (U)

(U) Cost estimates were developed and reviewed for support of major system decision reviews by the ASARC and DSARC for SHORAD C2; JSTARS; AHIP; AAWS-M; and MLRS-TGW[4]

Contract Cost Performance Division (U)

General (U)

(U) On 15 October 1984 the Contract Cost Management Division was renamed the Contract Cost Performance Division, and responsibility for the Division was transferred from the DCS for Procurement and Production to DCS Resource Management. The decision was influenced by a July 1984 study aimed at standardizing the procurement organizations of the major subordinate commands, and of an AMC White Paper, Weapon System Costing, Budgeting, Pricing, and Contracting, June 1984. The decision was based on the desire to align the Division more closely with Cost Analysis, and also on the fact that several major subordinate commands already had aligned these missions and functions with the cost analysis organization. During most of the year, the Division was without three of its nine authorized action personnel due mostly to the slowness of the personnel recruiting and replacement process.

(U) At the direction of DCSRM, the MSCs which were not already aligned with cost analysis (except ERADCOM) were changed. They were AVSCOM, AMCCOM and TROSCOM. ERADCOM, in process of becoming LABCOM, postponed this action.

Progress in Applying Cost/Schedule Control System Criteria (C/SCSC) (U)

(U) The number of accepted implementations of C/SCSC, involving AMC-led reviews, increased by 27 during FY85 to a total of 274. There were 24 more applications of C/SCSC in various stages of the implementation process at the end of FY85.

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[4] Internal Review and Audit Compliance Historical submission, FY85.

(U) With the Air Force member as coordinator of the Performance Measurement Joint Executive Group (PMJEG), the Division Chief attended four meetings of the PMJEG during the year. Representatives of the three Services, Office Secretary of Defense (OSD), Defense Contract Administration Services (DCAS), Defense Contract Audit Agency (DCAA) and National Security Agency (NSA), considered various matters of tri-Service policy and implementation. On 1 July, the function of PMJEG Coordinator rotated to the Navy.

(U) In May 1985 a tri-Service conference of C/SCSC Review Directors was held with the objective of obtaining more uniform application of C/SCSC to contractor management systems. Many issues were discussed relative to interpretation of published guidance.

(U) In a continuing dialogue with industry, AMC actively participated in two meetings with the National Security Industrial Association (NSIA). On 16 April the meeting was with the C/SCSC Working Group of the Management Systems Subcommittee of the Procurement Committee, and on 21 May the meeting was with the full Management Systems Subcommittee. The meetings produced better mutual understanding and the resolution of most of the problems.

Independent Assessment of Major Contracts with Cost Risk (U)

(U) Contract Performance Analysis Branch prepared monthly an independent analysis of cost and schedule performance and final cost estimates on major acquisition contracts with cost risk. The results were presented to the Deputy Commanding General for Research, Development and Acquisition (DCGRDA).

(U) In addition, the contract cost portion of the following reports was reviewed when each was submitted to HQ AMC: Program Management Control System (PMCS) Monthly Status Reports, Selected Acquisition Reports, Unit Cost Reports, and Defense Acquisition Executive's Summary Reports.

(U) Training. Continuing support for four C/SCSC-related training courses consisting of soliciting and screening applicants, reviewing course content, and presentations (including panel participation) during classes. The four courses were Contractor Performance Measurement at Defense Systems Management College (DSMC), C/SCSC and Analysis of Cost Performance Reports at Air Force Institute of Technology (AFIT), and Managing with Contractor Performance Measurement Data at Army Management Engineering Training Activity (AMETA).

(U) Four-hour blocks of instruction in Contract Cost Performance Measurement and Reporting were presented to four classes of the Materiel Acquisition Management course at the Army Logistics Management Center (ALMC).

(U) AMC personnel gave two presentations and participated in two panels at an industry Cost/Schedule Systems Conference held in November 1984 in Washington DC and in May 1985 at Los Angeles, California. Each conference was attended by more than 100 industry representatives.[5]

Finance and Accounting Division (U)

(U) A major change in the handling of customer orders was directed by OSD to be effective for FY85. Since the change was not received by DA until 30 September 1985, DA made a summary level adjustment to the 30 September 1985 reports and AMC activities would begin efforts to identify specific adjustments to be completed by 31 December 1985. The multi-year appropriation customer order would be handled like one year order. All orders would be written down to the executed amount.

Program Execution (U)

(U) AMC FY85 obligations were $33.1 billion against an obligation plan of $35.1 billion and released program of $40.3 billion. FY85 obligations represented 94.2 percent of planned obligations and 82.1 percent of released program.

(U) AMC closed FY85 $2.0 billion short of forecast. A good part of the shortfall ($1.0 billion) resulted from factors outside the AMC sphere of influence, such as congressional decision on Mobile Subscriber Equipment and Multi-Launch Rocket System, OSD program holds on Army Helicopter Improvement Programs, termination of SGT York program and customer orders cancellation. Certain other contract requirements were intentionally held up either by the commanders or by the headquarters for good business sense reasons. Specifics included redoing solicitations to maximize competition and comply with acquisition streamlining initiatives, as well as finalizing contracts on a sound business basis.

(U) Consolidation of DESCOM Accounting Operations. The Department of the Army (DA) announced to Congress on 24 April 1985, the regionalization of finance and accounting support operations by consolidating Finance and Accounting Offices (FAO) at Sharpe and Sierra Army Depots into the Sacramento Army Depot FAO. In addition, the FAO at Corpus Christi Army Depot was consolidated into the Red River Army Depot FAO.

(U) The Sacramento consolidation was successfully accomplished on 1 September 1985, while the Red River consolidation was effectively implemented 1 October 1985. Through consolidation, 54 spaces were saved and made available for use at the discretion of the depot commanders in direct areas.

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[5] Contract Cost Performance Division Historical submission, FY85.

(U) Removal of RDTE Activities from Army Industrial Fund Financing. By OSD direction, the AIF was removed as a means of prefinancing operations at three AMC RDTE activities. Beginning on 1 October 1984, the operations of Harry Diamond Laboratories (HDL) and Army Materials and Mechanics Research Center (AMMRC) were converted to direct RDTE financing; on 1 October 1985, a similar conversion took place at the US Armament Research and Development Center (ARDC).

(U) Beginning with March 1983, In-Process Reviews (IPR) were held quarterly, reviewing the progress made during the previous quarter and the DECAP process, AMC and DA representatives were able to offer assistance to solve the majority of the DCAP related problems raised by HDL, AMMRC and ARDC. In October 1985 ARDC successfully decapped the AIF and was operating under the RDTE appropriation.

(U) Army Materiel Command Division (AMCD) (Wholesale) Army Stock Fund (ASF) Cash Management. AMCD Treasury cash balance on 30 September 1985 of $568.3 million was an increase of $198.7 million during FY85. The increase was comprised of net cash allocations of $215.3 million, offset by negative net cash from operations of $16.3 million and a small decrease in FMSO-I advances of $.3 million. Treasury cash was traced in FY85 by three cash breakouts—operating, inventory augmentation and mobilization. These breakouts were related to the funding breakouts. The DA norm of 12 days of average treasury disbursements was the criteria used to control operating cash. The DA established norm for FY85 was $58.9 million. An excess in operating cash in FY85 resulted in a $100.0 million cash allocation return to DA in March 1985. In April 1985 the AMCD received a cash allocation of $102.3 million which was transferred through the ASF to OMA.

(U) Cash allocations of $154.9 million were received for recorded augmentation obligations and $59.5 million for recorded mobilization obligations during the fiscal year.

(U) As a result of these transactions, AMC ended FY85 with $286.5 million operating cash, $126.9 million augmentation cash and $154.9 million mobilization cash. The operating cash balance (as adjusted for allocations due for September augmentation and mobilization recorded obligations) was approximately $165.8 million in excess of the 12 day DA norm. It was anticipated that DA would withdraw the operating cash during the first half of FY86.

(U) Conventional Ammunition Working Capital Fund (CAWCF). CAWCF continued to fulfill its purpose during this fourth year of operations. Eighty-five percent of the funds available was obligated during FY85 as compared with 82 percent in FY84 and 60 percent in FY83. Sales increased 14 percent during FY85 over FY84. Procurement costs continued to decline while the general economic price level continued to increase slightly.

(U) Reemphasis on Effective Obligation Procedure. A HQ AMC workshop/study group was formed to address obligation procedures. The group reviewed Audit Reports, problems from the field, and regulatory

changes that impacted obligation procedures. The group prepared a final directive which contained expanded definitions, clarification of regulatory interpretations, clarification of responsibilities, and reidentification of obligation problems. The thrust of the directive was to involve MSCs in continuously monitoring significant deobligation which required corrective action. It was perceived that improvement had to be realized in the obligation procedure to prevent possible reductions in programs.

(U) Upgraded Funds Control System. AMCRM-FOF designed a new automated fund control system, which replaced the largely manual system previously in use. The system was operated on a Plexus P/60 and was a real-time system which simultaneously checked funds availability, updated account balances and created a hard copy funding document. The system also operated in an interactive mode with the Budget Division which permitted loading of data by the program manager and approval by Finance and Accounting without the necessity of hard copy program documents. The software was developed by Service Management Corporation, using the INFORMIX Database Management System with necessary C programming modifications.

(U) Army Charge Card Test. On 5 August 1985, HQ AMC began implementation of the Army Charge Card Program as one of the test sites. The program involved issuance of a Diners Club Card to frequent travelers, who would use the card for hotel accommodations, car rentals, and other expenses where the card was accepted; consequently, the traveler's per diem was cut to 40 percent instead of 80 percent. Originally, the test was limited to supervisory and military personnel since DA failed to obtain national union concurrence. However, the test was expanded on 12 November 1985 to include bargaining unit employees as well. The Charge Card Program was expected to reduce outstanding travel advances, reduce workload in the FAO, and provide management reports which would aid in contracting for government service.

Establishment of US Army Information System Command (U)

(U) Accounting procedures for funding the transfer of personnel and spaces to USA Information Systems Command (ISC) were issued to the appropriate field activities and Directors of Information Management (DOIM) by the Policy and Procedures Branch Finance and Accounting Division on 26 September 1985. These procedures were an interim measure until FY87, at which time ISC would receive direct funding for those spaces transferred.[6]

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6 Finance and Accounting Division AHR submission, FY85.

Assistant Deputy Chief of Staff for Program Budget (U)

Organization (U)

(U) Reorganization of the AMC Comptroller organization into DCSRM caused significant changes in the area of program and budget. These changes necessitated the establishment of the Office of the Assistant Deputy Chief of Staff for Program Budget. This office was assigned the mission of developing, maintaining and disciplining the resource management process (planning, programing, budgeting and execution system (PPBES) for AMC to ensure that available resources are planned and programed for optimum utilization.

(U) Specific organizational changes involved transfer of program execution for the Procurement Appropriations and RDTE to the Office of the Deputy Chief of Staff for Resources Management (ODCSRM) from Office, Deputy Chief of Staff for Supply, Maintenance and Transportation (ODCSSM) and Office, Chief of Staff for Development, Engineering and Acquisition (ODCSDEA), respectively. Program and budget responsibilities were also transferred from ODCSSM for the Army Stock Fund, PA Secondary Spares Program, and CAWCF. These functions along with PA execution constituted the Procurement Appropriation and Army Stock Fund Division. The Program Analysis and Evaluation Directorate was abolished with long range planning being transferred to the ODCS for Readiness. Policy function was transferred to the ODCSRM Program Budget and Funding Policy Division, and the remainder of the directorate was consolidated into the Program Integration Division. The Program Budget and Funding Policy Division was constituted from a branch of the Operations and Maintenance, Army (OMA) Budget Division and the elements of PA&E discussed above. OMA Budget Division less Policy Branch as discussed above was assigned the AMC Headquarters Budget Office and the Army Family Housing account.

(U) Concurrent with the reorganization several initiatives were undertaken as a result of direction from both the Commanding General, AMC, and HQDA. These initiatives include Zero Base Budgeting (ZBB), Management Decision Package (M-DEP), program analysis and resource review (PARR)/command operating budget (COB) consolidation and Integration of Program Integration Capabilities (IPIC). These and other initiatives are discussed in greater detail in each of the Program Budget Division/Office narratives.

Program Budget and Funding Policy Division (U)

(U) Zero Base Budgeting. In April, General Thompson tasked the Deputy Chief of Staff for Resource Management to implement Zero Base Budgeting (ZBB) within the Army Materiel Command during FY86 to improve core visibility. A ZBB Working Group was established at HQ AMC on 16 April 1985. Results of the working group were briefed to DCSRM and MSC comptrollers. Phase I of the ZBB concept implementation addressed only the FY86 Operation and Maintenance, Army (OMA) Program 7S, which is approximately half of the OMA core. Key concepts were used of (1)

M-DEP; (2) functional breakouts; (3) increments; and (4) prioritization of functions under ZBB procedures. The first ZBB submission was due to HQ on 30 September 1985.

(U) Implementation of Program Integration Capabilities (IPIC) Task Force. The IPIC task force was formed on 26 August 1985 with the objective of developing a system to assure integrated, balanced programs were presented to HQDA and to allow AMC leadership to approve before DA position was locked.

(U) The Army Plan (TAP)/Macroanalysis Process. The macroanalysis process was initiated by HQDA to try to outline balanced program guidance for TAP in view of known sizable total obligation authority reductions in the program years. The Chief of Staff, Army invited each 4 star to participate. The theme of the CG's letter was to preserve overall Army balance in a decrement environment.

(U) Program Objective Memorandum (POM) Control Working Group (PCWG). Initiated the POM Control Network (POMNET) to enable AMC to interface with HQDA during POM development. DCSRM managed and led the PCWG, which resulted in better AMC interface with the HQDA functional panels and Program Budget Committee during POM building.

RDTE Execution Office (U)

Future Year Operations (U)

(U) The FY87-91 RDTE Program. The USAMC funded FY87-91 Defense Plan as reflected in the May 1985 Project Listing is discussed below.

FY87	FY88	FY89	FY90	FY91
4610285	5130769	5170496	5557575	6708682

(U) Based on AMC's POM to Budget Issues and the Deputy Chief of Staff for Research, Development and Acquisition, Department of the Army, review of the AMC program, the following changes were made:

FY87	FY88	FY89	FY90	FY91
4886912	5309658	5227396	5537842	6238467

(U) The FY87 program was to be presented to Congress in January 1986.

Program Execution (U)

(U) The total direct RDTE FY85 program released to AMC as of 30 September 1985 was $3,531.1 million of which $3,303.0 million was obligated for an overall AMC obligation rate of 93.5 percent. This compares quite favorably with the Department of the Army (DA) obligation goal of 90.0 percent for the RDTE appropriation.

(U) Through the Scorecard Reporting System, this headquarters continuously assessed the progress of each command toward meeting a time-phased obligational plan established by the subcommand and/or activity.

(U) The following chart reflects the direct FY85 program and percent of obligation achieved for each major subordinate command and the separate activities and HQ AMC as of 30 September 1985.[7]

Command	Released Program ($M)	% Obligated
AMCCOM	$557.9	94.2
AVSCOM	433.7	93.3
TROSCOM	144.4	98.7
ERADCOM	479.9	96.4
CECOM	360.1	99.1
MICOM	388.1	86.7
TACOM	227.3	81.8
TECOM	403.0	99.6
Other AMC	536.7	90.7
	3,531.1	93.5

(U) This headquarters also closely monitored the disbursement rates of the RDTE activities in an effort to assess compliance with the principles of incremental funding. The overall AMC FY85 disbursement of 50 percent met the goal established by DA. The actual rates for the activities are shown in the following table:

Command	% Disbursed
AMCCOM	47
AVSCOM	41
TROSCOM	68
ERADCOM	46
CECOM	49
MICOM	43
TACOM	29
TECOM	75
Other	54

Procurement Execution Stock Fund Division (U)

(U) The Procurement Execution and Stock Funds Division was established in DCSRM to perform the functions transferred from Deputy Chief of Staff for Supply, Maintenance and Transportation (DCSSMT). Responsibility for Army Stock Fund, PA-2, Conventional Ammunition Working Fund Program, Procurement Army (PA) Major item Execution, and Base Level Commercial Equipment (BCE) was transferred from Deputy Chief of Staff for Supply, Maintenance and Transportation to the Deputy Chief of Staff for Resource Management.

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7 Scorecard Reporting System (RCS AMCDE-134).

Budget Division (U)

Status FY85 Operations and Maintenance, Army (OMA) Funds (U)

(U) With an obligation plan and funding availability of $5.412 billion, total actual obligations at yearend were $5.411 billion or 99.98 percent. Although the program increased in FY85 as compared with FY84, severe funding constraints in P7S (Supply) required a DA approved reprogramming action of $16.1 million from P7M (Maintenance) in the 4th Quarter. This belated action impacted on the timely execution of the command's obligation plan.

(U) In July 1985, ERADCOM was reorganized and redesignated LABCOM, incorporating the Army Materiel and Mechanics Research Center (AMMRC), the Army Research Office (ARO) and the corporate laboratories. Concurrently, the Intelligence Materiel Development Support Office (IMDSO) was redesignated the Intelligence Materiel Activity (IMA), a Class II activity, reporting directly to HQ AMC. Appropriate funding realignments were made to accommodate these organizational changes.

(U) The level of Base Operations funding support improved from the depressed FY84 program of $180.5 million to $193.7 in FY85. Although this represents a 7.3 percent gain from the prior year, a more realistic measurement from the FY83 level of $185.1 million reflected a 2.3 percent year-to-year gain. An increased effort was made in FY85 to support anti-terrorism security initiatives, community service activities, and administration support for AMC activities and non-AMC tenants.

AMC Management Decision Package (M-DEP) Concept (U)

(U) An AMC Management Decision Package concept was developed and pursued in an attempt to resolve many problem areas associated with the Army and AMC Planning, Programming, and Budgeting System (PPBES). Under the PBBES structure in FY85, AMC received almost 600 Program Development Increment Packages (PDIPs) from DA, built along appropriation "stovepipe" lines, with no Budget/Execution feedback loop. Also, AMC did not use most of these PDIPs since they did not represent reality or mirror the way AMC did business. After a massive study and staffing effort in both the field and HQ AMC, a new decision package concept tailored to AMC operation practices was presented to DA. The AMC M-DEP concept included 180 M-DEPs broken into the following six categories: Commodity M-DEPs, Intensively Managed Weapon System M-DEPs, AMHA M-DEP, and TOE M-DEP.

(U) Efforts were set in motion to develop the FY88-92 Program Analysis and Resource Review (PARR) and the FY86 Zero Based Budgeting (ZBB) submissions using this structure. Informal approval on basic concept was given by DA before FY85 ended.

Command Operating Budget (COB)/PARR Consolidation (U)

(U) In FY85 the COB and PARR processes were combined in order to integrate them into basically one format which could be used for both requirements. The approach enlarged upon similarities, recognized the differences, and eliminated unnecessary and marginally valuable data. One submission for both would be due in May of each year with a PARR update required in October. The cost Data Worksheet (CDWS) in the M-DEP format would be used as the primary vehicle for data input. Data would be entered into the HQ PRMS data base using magnetic tape or LOTUS diskettes depending on the MSC choice. Key benefits of this integration would include improved continuity from program to budget and improvements in standardized methodology used in requirement computation.[8]

Program Integration Division (U)

(U) The Program Integration Division continued its program analysis and evaluation efforts in areas such as the Research, Development and Acquisition (RDA) Core Team, the Long-Range Research, Development and Acquisition Plan (LRRDAP), PARR, Light Infantry Division (LID) development, and Army Materiel Plan (AMP) reviews. To improve both mission and command performance, the division initiated a new procedure to integrate intelligence input into resource programing efforts. The division contributed heavily to several other efforts to improve effectiveness. These included the Integration of Program Integration Capabilities (IPIC), Program Decision Increment Package (PDIP) revisions, and Materiel System Reviews.

RDA Reviews (U)

(U) RDA reviews began early in the year with TRADOC schools and centers and AMC MSCs developing mission area materiel plans (MAMP). In May the mission area managers (MAM) reviewed, approved and submitted MAMPs to the Core Team for final review and approval. This was the first year that the review was conducted by mission areas and the first year that the Core Team did not visit the field activities. This year about half of the procurement appropriation was reviewed in addition to RDTE. The products generated included: an integrated RDTE/procurement program priority list by mission area; a workable FY86 program of execution; FY87 program objective memorandum (POM) to budget issues; FY88 POM issues; input to the LRRDAP; and guidance to the PMs and Labs on the conduct of their work.

LRRDAP (U)

(U) As a part of the Army Plan, LRRDAP addressed RDTE and procurement programs for the five POM years and the ten additional Extended Planning years (FY88-2002), providing details on prioritization, quantity and dollars profile, and supporting mission, and program descriptions organized by mission area.

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[8] Budget Division historical submission, FY85.

(U) Two major changes made by DA in the LRRDAP structure also altered the AMC and TRADOC review process. Responding to AMC's request, HQDA provided more realistic planning guidance in the form of likely funding bands FY88-02. TRADOC and AMC were tasked to ensure that the minimum band contained a balanced expenditure Army program. The second change concerned the identification of all RDTE and procurement resources required to develop, produce, modify and sustain a system in our program decision increment package. Increments representing different production rates, fielding rates, IOC dates, acquisition strategies, or technological approaches were constructed to give decision makers reliable program alternatives. TRADOC prioritized the increment packages while AMC assessed executability/business sense concerns and the completeness of the dollar and quantity profiles. The ultimate goal of these changes was to smooth the transition process from the LRRDAP to the POM.

PARR (U)

(U) The PARR is the document through which AMC outyears resource requirements are presented to HQDA. It includes Operation and Maintenance, Army (OMA), Army Family Housing (AFH), Military Construction, Army (MCA), and manpower requirements. It provided AMC's input to the POM building process. The Modernization Resource Information Submission (MRIS), an integral part of the PARR, was used to forward information required to support specific major systems resource requirements. The fiscal year began with a General Officers level field review of FY87-91 requirements. Upon approval by the OMA Core Team and the Resource Action Committees, the FY87-91 PARR, containing an Executive Summary of AMC-directed PDIPs and MRIS input, was submitted to HQDA in January 1984. Immediately thereafter, AMCRM-PI began working on the process for the FY88-92 submission. Preparations started with distribution of the Field Instructions (guidance for AMC's subordinate activities). To ensure an understanding of these instructions and the overall PARR process as well as promote continuity in requirements interpretation, Program Integration (PI) Division hosted an AMC Programmers' Budget Conference. Nominations for AMC directed PDIPs were then solicited from both the AMC staff and participating field activities. The remaining PDIPs were prioritized for submission to HQDA where they would compete for funds. Data for the FY88-92 PARR was due to HQ AMC by the end of the fiscal year.

HTMD/ADEA/LID (U)

(U) Funding requirements for the 9th Infantry Division (ID) identified Phase I go-to-war surrogate equipment was fully developed and forwarded to the DA staff for resourcing. A process for reporting obligations of Army Development and Employment Agency (ADEA) RDTE funds was developed and further guidance was provided to the AMC MSA and ADEA on future program development and execution. Working with DCS for Planning Technology (DCSLS), the PI Division assisted ADEA with their PARR submission to prevent duplication with AMC programs and to ensure the most efficient use of resources.

Army Materiel Plan Review (U)

(U) Working with AMCSM, PI Division initiated the first AMC Command Review of the Summer AMP process. From this review and a DA staff initiative to integrate the planning, programing, budgeting and execution system (PPBES) process, the IPIC task force was established.

Intelligence Input to Resource Programing (U)

(U) A new procedure was formalized to allow the DCS for Intelligence (DCSI) to provide input to the resource managers (DCSRM) to influence executability analyses and decrement drills. In accordance with a prescribed format, the DCSI was preparing issue sheets on systems, either in production or in research and development, which may no longer be responsive to the threat. These issues would be used by DCSRM analysts during budget cutting exercises to find sources for needed funds. Also, the analysis provided by the DCSI would be used by Weapon Systems Staff Managers and Weapon Systems Staff Officers in DCSDE and DCSLD as guidance as to what system changes, product improvements, and new research directions are needed. This effort was coordinated by AMCRM-PIM.

IPIC Task Force (U)

(U) A PI Division representative served as the core team member who initiated this study and recommendations to the HQ AMC staff on processes and management initiatives to implement total program integration at the AMC level. This very complex and interdependent task continued into FY86.

Single Manager for Conventional Ammunition (SMCA) Program Decision Increment Package (PDIP) (U)

(U) SMCA would manage Department of Defense (DOD) Conventional Ammunition Acquisition (including production, production base and procurement, logistics, including supply, distribution, transportation, storage, maintenance, renovation, demilitarization and disposal), financial management and personnel and training functions as specified in DOD Directive 5160.65. The participants in this effort were AMCCOM, DESCOM, MICOM and USATHAMA. AMCRM would ensure that the overall program was properly balanced.

(U) During the October 1984-September 1985 budget cycles, the program experienced considerable problems. During Sustain Panel proceedings "Cherry Blossom Drill" and other decrements, the SMCA program experienced large cuts in FY87and FY88 resources. Under the existing funding levels, the Army could not execute this program in the two years. Additional resources were necessary to bring SMCA into

compliance with DOD Directive 5160.65 and allow the Army to meet its interservice commitments. Extensive efforts were made between DA and AMC staff to preclude another turbulent budget drill/cycle.[9]

Force Development Division (U)

Personnel Space Authorization and Strength (U)

(U) Civilian. The DA civilian program to AMC for FY85 (111,825) when compared with the FY84 program (115,492) showed an overall net decrease of -3,667 civilian spaces.[10] This net decrease related to several significant program changes in FY85, such as: An increase to the AIF program based on funded customer workload, Program Budget Decision (PBD) 401; a reduction in both the AIF and non-AIF programs due to PBD's 666 and 666C which reduced DOD civilian employment levels; an extension of FY84 reduction per PBD 605 which reduced direct hire civilians; an increase in the RDTE program to modernize Dugway Proving Ground; an extension of the FY84 increase for the Spare Parts Program; and an extension of FY64 reductions resulting from projected savings based on economies and efficiencies.

(U) Civilian End Strength. Actual (direct hire) civilian strength increased from 116,115 at end FY84 to 117,952 at end FY85, a net difference of (+) 1,837; actual Full Time Permanent (FTP) civilian strength increased from 111,193 to 112,931 in the same period, a net change of (+) 1,738.[11]

(U) Elimination of Civilian Ceilings. On 19 October 1984, the President signed the DOD FY85 Authorization Act which provided for a one-year test of operating without end strength ceilings in all DOD activities. The 'no ceiling" provision for FY85 ensued from the excellent results of a similar test for DOD industrially funded activities during FY83 and FY84 where civilian employment levels were driven by funded workload. In lieu of end strength ceilings during FY85, HQDA elected to control civilian strength by assigning Annual Financial Targets (AFT) which capped the amount of funds that could be spent on pay and benefits for civilian personnel. Within assigned AFT, DA organizations were required to develop Civilian Employment Level Plans (CELP) to project the number of civilian employees expected to be on-board at the end of each month. Explanations were required when actual strength at the end of a month differed from the projection by 3 percent or 1,000 (whichever was less). A major problem encountered under this method of control was that the AFT assigned to AMC did not cover all AMC funded work (e.g. depot work covered by customer orders; RDTE reimbursable work; and Foreign Military Sales (FMS) work totally funded by foreign customers).

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9 Program Budget Historical submission, FY85.
10 See Table, this chapter, for detailed statistics.
11 See Table, this chapter, for major activities breakout.

TABLE I

REFLECTS THE ADJUSTMENTS IN AMC MILITARY AUTHORIZATION AND CIVILIAN EMPLOYMENT PROJECTIONS

FY85 DA PROGRAM TO AMC (OCT 85 PBG)

	MILITARY				CIVILIAN EMPLOYMENT PROJECTION		
	TOTAL	OFF	WO	ENL	TOTAL	FTP	OTHER
END FY 84	10894	3323	283	7288	115492	114551	941
END FY 85	10642	3226	274	7142	111825	110926	899
FY 85 (+/-)	-252	-97	-9	-146	-3667	-3625	-42

FY 85 AMC PROGRAM (OCT 85 PBG)

	MILITARY				CIVILIAN EMPLOYMENT PROJECTION		
	TOTAL	OFF	WO	ENL	TOTAL	FTP	OTHER
END FY 84	10853	3314	280	7259	115038 1/	114974	64
END FY 85	10634	3231 3	274	7129 3	112179 2/3/	112115	64
END FY 85 (+-)	-219	-83	-6	-130	-2859	-2859	0

NOTE: AMC program for military spaces differs from DA program due to administrative lead time in implementing/reporting military changes.

1/ AMC PBG reflects below DA civilian program due to FY 84 implementation of PBD 666C cut that was effective in FY 85

2/ AMC PBG reflects above DA civilian program due to AVSCOM/TROSCOM reorganization, Spare Parts Contracting not effective until FY 86 and a billpayer reduction for FY 85 only. Because of No Ceiling" test for FY 85 reductions were not applied.

3/ Excludes AMHA reduction (4 off, 1 enl, 21 civ) which DA instructed "Do Not Execute".

TABLE II

MAJOR AMC ACTIVITIES
ACTUAL CIVILIAN STRENGTH
(DIRECT HIRE)

	FY84 30 SEP 84 TOTAL	FY85 30 SEP 85 TOTAL	DIFFERENCE AS OF 30 SEP 85
TOTAL	116,115	117,952	+1,837
(FTP)	(111,193)	(112,931)	(+1,738)
(OTHER)	4,922	(5,021)	+(99)
COMMAND MGT	2,206	2,225	+19
MSC'S (LESS DESCOM)	66,460	67,385	+925
DESCOM/DEPOTS	40,209	40,423	+214
PROJECT MANAGERS	392	447	+55
RESEARCH LABS	1,602	1,709	+107
ALL OTHERS	5,246	5,763	+517

(U) Management of Civilian Strength. Selected P7S Freeze: In the absence of a ceiling on civilian end strength, AMC's direct hire on-board strength increased over 2,300 by end 2nd Qtr FY85. P7S dollar shortages once again plagued AMC, and reprogramming efforts were not sufficient to sustain manning levels for several MSCs. Based on an AMC Executive Resource Action Committee (RAC) decision, a P7S civilian hiring freeze (partial 1 for 2) was imposed on AMCCOM, AVSCOM, CECOM, DESCOM and MICOM on 5 April 1985. AMC's on-board strength continued to climb. Therefore, AMC, during 3d Qtr FY85 began negotiations with HQDA for additional FY86 budgeted workyears, while stressing to its field commands and activities the need to reduce growth in actual strength.

(U) Command-Wide Freeze. Progress in both areas was minimal and guidance from HQDA precluded the early release of temporary employees, compounding the difficulty. In July 1985, AMC's actual direct hire strength peaked at 122,035—an increase of almost 6,000 from end FY84. On 9 August 1985, an AMC command-wide hiring freeze was effected. This freeze limited civilian hiring to one new hire per loss of two permanent employees to outside of AMC, and directed the release of all temporary employees at expiration of existing appointment.

(U) End FY85 Closeout. With the hiring freeze still in effect, AMC closed out FY85 with a direct hire civilian on-board strength of 117,952. This was 6,127 over DA guidance (111,825) for end FY85, and reflected a decrease in strength of 4,083 from the 31 July 1985 level (just two months prior to the end of FY85).

(U) End FY85 Impact on FY86. Summer-long negotiations with HQDA culminated in receipt of revised FY86-88 civilian manpower guidance on 25 September 1985. This new guidance represented an increase to both FY86 civilian employment estimate (CEE) and workyears over those levels contained in the DA October 1985 PBG. AMC's end FY85 position placed the Command in a good posture to execute its FY86 program.

Military (U)

(U) AMC programed military space authorizations remained relatively constant from end FY84 to end FY85 (10,853 FY84 and 10,634 FY85). Actual (on-board) strength decreased from 10,456 at end FY84 to 9,652 at end FY85. This equated to an understrength of 982 military personnel from the authorized FY85 (10,634 and 9,652).

(U) Force Alignment Plan II, Command Grade Ceiling (FAP II, CGC). For FY85 AMC had a Basic Branch Field Grade (FG) ceiling of 1,430 officers (COL-355; LTC-632; MAJ-443). This ceiling was 340 below the documented FG authorization of 1,770 (COL-374; LTC-743; MAJ-653), and required that the difference be balanced by application of a Remarks Code 99 - fill at next lower grade during peacetime - to 340 FG TDA authorizations.

(U) Conversion of AMC Enlisted to Civilian (FY88). A DA Total Army Analysis 91 (TAA-91) decision reduced the number of enlisted spaces to be converted to civilian in FY88 from 2,300 to 1,000. AMC was subsequently informed that this decision was reversed. AMC would not be required to convert any of the original 2,300 spaces from enlisted to civilian.

(U) Operating Strength Deviation (OSDV). Final HQDA decision on AMC spaces to be converted to civilian was 91 military (78 officers/13 warrant officers). Conversion would occur during FY86 (63 officers/11 warrant officers) and FY87 (15 officers/2 warrant officers).

(U) European Troop Strength (ET). During FY85, AMC's European Troop Strength (ETS) ceiling was reduced from 612 to 608 military spaces. In another major development, CINCUSAREUR was designated by Joint Chiefs of Staff Memo 7-85 executive agent for developing and prioritizing a balanced Army in Europe, and was granted authority and responsibility to determine force and troop mix.

(U) Military to Civilian Conversion/1.5 percent TDA Cut. A major decision of the TAA-91 process was to require the TDA Army to convert approximately 4,000 military spaces to civilians. The final DA implementing message referred to this decision as the military to civilian conversion/1.5 percent TDA cut. AMC's share was to convert 217 officers and 1 warrant officer to civilian spaces in FY87. At end FY85 this action was being applied within the command.

Unprogrammed Manpower Requirements (U)

(U) In FY81, the term "Out-of-Cycle" (OOC) was coined by HQDA to identify Army-wide near term manpower shortfall requirements exclusive of those projected and addressed in the Army's Planning, Programming, Budgeting and Execution System (PPBES). These requirements were normally associated with unforeseeable circumstances and/or new missions levied upon MACOMs by higher authority which could not await normal PPBES cycle documentation. Requests for the staffing of these shortfall requirements were addressed to ODCSPER, DA for review by the DA Out-of-Cycle Manpower Review Committee, whose recommendation could only be approved by the VCSA. In January 1984 a Manpower Review Working Group (MRWG) was established at HQ AMC, with a membership of eight of the 14 directorates/offices of the Senior Resources Action Committee (RAC), which was to address unresourced/unprogrammed OOC manpower requirements and other manpower issues, and to take action leading to their resolution. At the Army Commander's Conference in the fall of 1983 and again in April 1984, the CG AMC addressed the chronic AMC manpower shortage problem, and stated that the OOC process was cumbersome and of minimum benefit. From its inception in FY81 through FY84, AMC requested 2,665 OOC spaces; however, 1,169 were supported and 1,496 were declined. Also, Program Budget Decision (PBD) 605 reduced AMC by 1,038 spaces in FY83, and beyond as a billpayer to meet other Army-wide requests. The net result was that AMC was provided little relief. At both conferences, the CG recommended the elimination of the

OOC process and that manpower resources be addressed up front by DA/DOD simultaneously with mission assignment. He further added that AMC would continue to participate in the OOC process so long as HQDA assessed "billpayers" on AMC to cover the spaces that were supported by the DA staff.

(U) FY85. Since AMC's manpower resources were in short supply, and new missions were levied by higher authority without additional resources, General Thompson issued a command-wide manpower management policy statement in October 1984, which emphasized that no additional manpower spaces would be forthcoming, and addressed alternatives to be followed to meet the challenge.[12] With the redesignation of DARCOM to AMC, and subsequent reorganization which placed the principal AMC staff resource advisors within one staff element--the Deputy Chief of Staff for Resource Management (DCSRM), including the Force Development Division. The Manpower Review Working Group (MRWG) was disestablished in January 1985. In lieu thereof, DCSRM was to administer manpower management functions through normal staff action, and refer unresolved/significant issues to the Senior Resources Action Committee (RAC). In February 1985, HQDA announced that OOC manpower requests would be accepted and processed only for military shortfalls; civilian requirements were to be absorbed by MACOMs from within their authorized workyears and assigned Annual Financial Target (AFT). In August 1985 HQDA announced that OOC procedures would be integrated into the Total Army Analysis (TAA) process. Routine OOC requests would be 'laid down' and held to compete with all other demands during the Annual August-October TAA review. Only emergency/warstopper requests would receive off-line processing, and then only if personally requested by a MACOM commander. For FY85, requirements for 294 spaces were addressed to DA as OOC. Of these, 73 were supported and 99 declined. Requirements for 122 spaces were still in process at DA, of which a request for 13 military was being reviewed by the General Officer Steering Committee (GOSC) of the TAA for the Abrams European Forward Fielding Team. At yearend, final results were not known.

Army Management Headquarters Activities (AMHA) (U)

(U) AMHA Delegation of Authority. As a result of a request from HQ AMC, HQDA (ODCSPER) revised the policy for controlling AMHA manpower authorizations. By 26 October 1984 message, HQDA delegated authority to all MACOMs to make internal changes within total authorized AMHA ceilings.[13]

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12 Commander's Guidance Statement (CGS) No. 43, HQ AMC, AMCRM, 10 Oct 84, subj: Manpower Management.

13 Msg, HQDA, DAPE-MBA, subj: Army Management Headquarters Activities (AMHA) Manpower Control Change, 261700Z Oct 84, as quoted in 55-RM-85.

Foreign Military Sales (FMS) Ceiling Exemption Legislation (U)

(U) The ongoing tri-Service attempt in FY84 to obtain amendatory legislation to exempt full-time (90 percent or more) FMS personnel from ceilings, was overtaken by events. The 1985 Defense Authorization Act contained a provision for a one-year lifting of civilian end strength ceilings in DOD. With the trial elimination of ceilings on a test basis for FY85, it was assumed that FMS staffing, funded exclusively by reimbursement from foreign governments, would finally not be constrained by an end strength ceiling. Such was not to be the case, however, since HQDA imposed workyear and AFT controls on MACOMs to hold civilian end strength relatively constant and to stabilize that strength. Reimbursable spaces were included in workyear and AFT controls, and since FMS positions generate accountable workyears, they were limited in their staffing capability during this period. The command-wide hiring freeze also impacted on FMS hiring since the freeze was not solely geared to end strength or funding issues, but principally to the lack of sufficient FY86 workyears. At yearend (28 September 1985) the CG, AMC, in a letter to General M.R. Thurman, prepared by the U.S. Army Security Assistance Center (USASAC), solicited VCSA support to get FMS-dedicated and reimbursable personnel exempted from Army end strength ceilings.[14] For end FY84, AMC covered FMS overhire positions through command-wide adjustments to end strength ceilings; relief in the way of pay-back from DOD/DA did not materialize. For end FY85 it was not necessary to cover FMS overhire positions through end strength adjustments since the no ceiling test permitted retention of FY85 non-authorized FMS personnel into FY86.

Manpower Office (U)

(U) Control of Overhires in HQ AMC. In filling civilian vacancies, recruitment administrative lead time created a situation called a hirelag where authorized positions were vacant until recruitment was completed. In HQ AMC, the hirelag would have resulted in about 10 percent of authorized positions being vacant at all times. To allow the full use of manpower authorizations, make full use of available funding, and keep elements up to strength, it was common practice in Army to allow elements to hire above authorizations and cover these overhires with the vacancies resulting from the hirelag.

(U) Headquarters elements were provided decentralized funding for pay of people and allowed to manage their own numbers of people onboard. Managers were allowed to hire above their authorization with the only constraints of having an established position, available payroll dollars, and a valid workload. By mid-FY85, the headquarters had eliminated the hirelag and was almost up to strength, but a problem was developing because manpower managers could not be certain that their authorization documents reflected a true picture of the organization. Overhires numbered about 190, or over nine percent of the civilian workforce, and imbalances began to appear between

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[14] Ltr, HQ USASAC, AMSAC-RP/R, 28 Sep 85, subj: FMS Manpower Support, as quoted in 55-RM-85.

elements. Some elements were overstrength and facing pay of people problems while others were significantly understrength. Because decentralized management of overhires was not working, AMC Chief of Staff published overhire allocations for each headquarters element and directed that overhires could only be recruited for like positions on the HQ TDA.

(U) This action was required to correct manpower strength imbalance between elements and bring actual people utilization in line with authorization documents. The use of overhires was a valid concept and necessary to obtain the full use of authorized resources. The lesson learned in FY85 was that overhire authority had to be centrally controlled and constantly monitored to prevent abuse.

(U) An overhire briefing was prepared to explain the appropriate use of overhires in HQ AMC, followed by a policy letter for command-wide distribution.

Manpower Qualitative Management (U)

(U) Manpower Staffing Standards Systems (MS-3). MS-3 was the Army-wide program with the objective of implementing a workload based system for identifying and justifying manpower requirements through the development and application of staffing standards (AR 570-5, Manpower Staffing Standards System, 15 May 1984).

(U) Originally implemented in FY84, the MS-3 program became fully operational in FY85. A major milestone in the program was the decision in April 1985 to consolidate the MS-3 program with the Army Performance Oriented Review and Standards (APORS) program and to assign responsibility for program execution to the AMC Management Engineering Activity (MEA), Huntsville, AL, a Separate Reporting Activity (SRA) under the DCSRM. Program management responsibility and staff oversite of the MS-3 program was retained by the Chief, HQ AMC Force Development Division. As result of intensive yet selective recruitment, 50 of the 64 MS-3 spaces were filled at the end of the year. The imposition of the AMC-wide hire freeze was in part responsible for not filling remaining vacancies.

(U) There were five functions in AMC covered by MS-3 standards: Civilian Personnel, Installation Safety, Fire Prevention, Dining Facilities, and Civilian Pay, validating a requirement for 3136 manyears against an authorized strength of 2472. During the year standards development efforts were underway in many other functions to include Procurement, New Equipment Training, Facilities Engineering, Finance and Accounting, and other installation support (BASOPS) areas. Coverage by standards was expected to increase significantly in FY86.

(U) Three efforts closely related to MS-3 were also initiated in FY85. MEA established the capability to develop and evaluate manpower models to project and validate requirements in those functions where detailed standards were either extremely difficult or costly to develop. One model, the Software Engineering Cost Model (SECOMO) was

adopted from private industry and was used in the FY88-92 PARR submission for Battlefield Automation. DA took the model and was in the process of testing it Army-wide for other software applications. Two other models, covering Central Procurement and Security Assistance functions, were also being validated.

(U) The second related effort involved a comprehensive review of the manpower portion of the FY88-92 PARR submission. Using the same statistical and comparative analysis techniques which were employed in applying standards, this gave the capability to validate workload/manpower relationships and constrain requirements to minimum hardcore essential.

(U) The final effort involved documentation of all TDAs with Army Functional Dictionary codes. Each position on the TDA reflected the major function performed; the AFD data base would then permit the Force Development Division to identify the total manpower required by discrete function, and give an additional tool for evaluation of resources requirements and utilization. The AFD data base would be a major factor in resource allocation/control.

(U) AMC Evaluation System (ARES) Redesign. The CG directed a redesign of the old DRES report into a new format called ARES - AMC Readiness Evaluation System. A prototype was developed by the HQ AMC Proponent, DCSRE, that incorporated provisions of the HQDA Army Logistic Assessment process into the new format. This enabled AMC to have a centralized readiness evaluation process compatible with the information needs of HQDA in their various tasking requirements on AMC. ARES, intermediate in its ongoing development, concentrated on the Logistic/Materiel aspects only in its CY85 submission. Manpower and personnel interfaces were not included in the prototype submission. Subsequent development of an ARES-Manpower input would depend upon future requirements of the Command.

(U) Operation PRO ACT. This major study effort, begun by the Directorate for Personnel, Training and Force Development (DRCPT) in May 1983, was intended to improve operations of four major functions throughout AMC. The Force Development Division, as overall PRO ACT Coordinator, managed the study efforts of the military personnel, civilian personnel, Adjutant General (AG) and force development functional areas. During CY84, the Civilian Personnel Study was completed with recommendations for consolidation of some Civilian Personnel Offices (CPO) and certain sub-functions in various geographical regions. Military Personnel Division completed efforts which resulted in the planned civilianization of a number of military positions in MSC Military Personnel Offices (MILPO). The Adjutant General had studies on automation and model AG organization well underway in CY84. As a result of the 19 August 1984 HQ AMC reorganization, the Force Development Division transferred from DRCPT to Deputy Chief of Staff Resource Management (AMCRM) and, consequently lost overall responsibility for the remaining AMCPE organizations' PRO ACT studies.

(U) The Force Development studies, assigned on 19 June 1984 were conducted by MSC and headquarters teams. MICOM, with support from TECOM and AMCCOM, studied the impact of Vertical Force Development Management Information System (VFDMIS) on force development functions and requirements for additional automated systems to support force development functions throughout AMC. AVSCOM, with support from DESCOM and TROSCOM, studied the feasibility of standardizing AMC force development organizations and consolidating force development organizations or functions in geographically proximate areas. The HQ AMC Force Development Division studied the feasibility of reducing manpower reporting requirements. The recommendations of the Recurring Reports Study team were implemented in February 1985. The recommendations of the Standardization/Consolidation team were not approved due to recent HQDA and AMC decisions on standardization and restructuring. The recommendations of the automation team were approved and had provided the basis for force development automation planning for the entire command.

(U) AMC Resource Management Executive Workshop (RMEW). The RMEW workshop was designed to provide SES, GM-15 and Colonels an insight into resource management including financial, budget and manpower. Case studies revolved around situational problems in the resource management operations at AMC field organizations. The RMEW included seven case studies which were disjointed. The new version related all packages. The case study was rewritten into five parts which consisted of: Determining/justifying manpower requirements, programing and executing a manpower change, distribution of manpower resources, balancing manpower and dollars, and options for reduction of workforce.

(U) Managing Manpower by Program Development Increment Package (PDIP). A study on this subject was conducted by AMCRM-MFL to determine the impact of managing manpower by PDIP. The existing Planning, Programing, Budgeting and Execution (PPBES) had a significant deficiency in that the execution stage provided no feedback for comparing actual execution to the resource decisions made during PPBES. This study was to determine the impact managing manpower by PDIP would have on AMC field activities, the feasibility of implementing such a change, and if HQ AMC implemented PDIP management under the existing PDIP system, to enable the field to provide utilization data by PDIP to this headquarters thus providing the necessary feedback in the execution stage. Under the existing system, there would be major disconnects in collecting actual manpower utilization by PDIPs. PDIPs were constantly changed by HQDA in the PPBES cycle; they would have to remain constant to enable the data to be collected. This would involve major system change in the method of conducting business. HQDA also recognized these problems and proceeded to take measures to correct these shortfalls. Actions taken included: the Army Management Structure Code (AMSCO) redesign and the Management Decision Packages (M-DEPs) scheduled from implementation in 1988-1992 POM cycle. HQ AMC took the proactive role and was in the process of implementing M-DEPs within AMC. Workyear utilization from level of effort against dollars

spent would be obtained, thus providing a certifiable accountability, or feedback until the AMSCO redesign became fully operational in 1988-1992 period.

(U) Mobilization Base Requirements Model (MOBREM). MOBREM as a computer model defining baseline resources for mobilization of the CONUS base was approved on 1 October 1984 as a standard Army Computer model by HQDA DCSOPS. In conjunction with Concepts Analysis Agency (CAA) and AMC DCSRE personnel, P7S/P7M manpower equations in the model were being updated under the MS-3 program of HQDA DCSPER into a standard Army system called MOBEPS (Mobilization Base Resources Planning System). As the system was implemented in CONUS, ongoing efforts were expected to be directed at organizational interfaces between HQDA and the MACOMs and within the MACOMs. MOBREPS as an integrated planning system has great utility in that, for the first time, all CONUS MACOMs would operate under the same consistent planning criteria/matrices for mobilization. AMC played and continues to play a cardinal role in the development of both the model and the system. As a separate feature, the model has a discreet AMC sub-module defining the resource, workload, manpower and other interface requirements across all the UICs of AMC during mobilization in P7S/P7M.[15]

(U) Officer Personnel Management System (OPMS). AMCRM-MFL participated with AMCPE in the total review of all Military Officer Positions (July 1985). The review encompassed job descriptions, grade, specialty codes and additional skill identifiers (ASI). AMC fared well in Specialty Codes 97 and 51 which were the major base specialties for the Materiel and Maintenance Management (MAMS) proponency. The review was conducted by the US Army Military Personnel Center and the US Army Manpower and Documentation Agency.

(U) Johnston Island Assessment Task Force (JATF). During a November 1984 visit by the VCSA to Johnston Island, several concerns were expressed which resulted in the Deputy Chief of Staff for Chemical and Nuclear Matters being tasked to conduct an assessment of that facility. The Force Development Division, DCSRM, assigned an analyst to participate as a staff member of the JATF to validate manpower requirements and to determine the skills required for the existing and projected toxic chemical munitions workloads and missions of the Johnston Island Chemical Activity (JICA). Results of the JATF assessment were briefed to the VCSA on 22 April and 16 May 1985. He approved an increased staffing of 156 spaces, including a large increase of 76 Military Police enlisted men and 31 civilians.

TAADS Operational Impact (U)

(U) TAADS operations were impacted significantly by a new HQDA initiative to stabilize and control the Army Force (Document Modernization) and an existing TAADS initiative, Management of Change. The most significant impacts required: Changing the AMC Resources Self Help/Affordability Planning Effort (RESHAPE) program to the HQDA Army

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15 Force Development Historical submission, FY85.

Functional Dictionary (AFD) program to enhance standardization in support of structure and performance analyses; initiating program to submit the AMC Command Plan to HQDA on 1 February and 1 August each year and match TDA/MTOE to the Command Plan by Unit Identification Code (UIC), Army Management Structure Code (AMSC) and personnel identity within AMSC by close of the TAADS Management of Change (MOC) windows on 31 March and 30 September each year; and adjusting the TAADS TDA/MTOE Submission schedule to better support the new documentation requirements.[16]

Unit Reporting System (UNITREP) Management (U)

(U) AMC directed that the Readiness Reporting function of UNITREP, under AR 220-1, be performed by AMCRE. Functional transfer from AMCRM to AMCRE was completed on 1 August 1985. AMCRM continued to perform JCS Pub 6 Unit Identification Code Information Officer (UICIO) functions and AR 525-10 functions of registering UIC in UNITREP and maintaining related Basic Identity Data Elements (BIDE). AMCRM retained workload, which equated to one manyear of effort, was not supported by manpower allocation.[17]

FY87091 Program Analysis and Resource Review (PARR) (U)

(U) The purpose of the PARR is to provide HQDA with a detailed estimate of resources required to operate and maintain facilities and equipment at an acceptable level of readiness. It also provides a formal means for obtaining needed program participation by commands and operating agencies. Through PARR, commands identify and explain their resource requirements. The annual PARR helps obviate fragmented collection of data by functional interests. Its systematic submission facilitates balancing resource allocations made in behalf of the commands in the POM. Manpower Programs Section developed manpower guidance, based on the DA May 84 PBG and the FY86/87 COB, which was used by command and activities in the development and preparation of their PARR submissions. The guidance was updated based on the DA October 1984 PBG. In November, AMC conducted the Executive Field Reviews at AMCCOM, AVSCOM, CECOM, MICOM, TACOM, TROSCOM, and DESCOM at HQ AMC. Representatives from the Section participated in the reviews. The DA MRIS Review Board met in January and reviewed approximately 50 systems. Representatives from the Section participated in the reviews. Civilian requirements totaled approximately 130,000 spaces in FY87, or a shortfall of approximately 17,000. Requirements for MRIS systems totaled approximately 17,500 spaces, military and civilians. Representatives from the Section participated in the mini-Programers Conference and the Program and Budget Workshop and attended the DA

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16 (1) Ltr, HQDA, PEMS-ZA, 9 Nov83, subj: Army Functional Dictionary (AFD) BASOPS; (2) Msg, HQDA, DAMO-FDZ, subj: Command Plan/AUTS Processing, dtd 072220Z Jan 85; (3) Ltr, AMCRM-MFT-M, 6 Aug 85, subj: TAADS Document Submission.

17 DF, AMCRM-MFT-M, 22 Jul 85, subj: Responsibility of Readiness Reporting.

Force Modernization Conference. In spite of many diversions, late receipt of DA PBG, late receipt of command submissions, all due dates were met and some ahead of schedule.

Command Operating Budget. (U)

(U) Major commands and operating agencies formulated operating requirements for FY86 and FY87 based on the POM and the DA May 1985 issue of the PBG. These requirements were submitted to HQDA in July 1985 as the COB. COB costs resourced decisions which were made during the program cycle. They updated amounts previously recorded for the prior year and current year, and they justified command requirements. Appropriation directors used COB requirements and workload data in developing and evaluating their budget estimates. AMC civilian requirements for FY86 totaled 126,711 and 126,889 for FY87, excluding additional requirements for Depot Maintenance (DESCOM). Military requirements were about 11,475 for both FY86 and FY87. AMC identified significant civilian increases for Supply Management, Central Procurement, Maintenance Support, and Base Operations. AMC requested numerous program adjustments between appropriations and between and among budget programs. During August and September, Manpower Programs Section representatives worked closely with the DA program directors and DCSPER, and were successful in getting all requested reprograming for FY86 and FY87 accomplished in the DA October 1985 PBG. All approved COB reprograming actions were implemented in the AMC September PBG.

FY87 Army Industrial Fund (AIF) Budget and FY85 Annual Report (U)

(U) The budget system was designed to provide data required by OSD and OMB to evaluate operations and the financial condition of AIF activities. AIF Budgets were submitted by AMCCOM (Arsenal/Labs), DESCOM (Depots) and MICOM (including TMDE) and included FY85, FY86, and FY87. FY85 and end strengths and workyears were based on actual execution through March and projections for the remainder of the fiscal year. FY86 and FY87 end strength levels were based on the DA May PBG as adjusted by approved reprograming requested in the FY86/87 COB. FY86/87 workyears were based on FY85 utilization rates. FY85 projections were 57,429 end strength and 58,538 workyears. FY86 estimates were 52,775 end strength and 57,059 workyears. FY87 estimates were 51,033 end strength and 54,491 workyears. Effective 1 October 1985, AMCCOM R&D Activity was transferred to non-AIF, the Missile Intelligence Agency (MIA) was transferred to the Assistant Chief of Staff for Intelligence, and Rocky Mountain Arsenal was transferred to non-AIF. Significant manpower changes in AIF included reductions based on PBD 401 (601 spaces) in FY86, depot maintenance reduction (approximately 2,200 spaces) and APORS reduction (about 600) in FY87.

Schedule on Detail of Permanent Positions (U)

(U) This report is submitted to the Comptroller of the Army in November of each year. It contains the actual permanent civilian positions filled (by grade) for current years and estimates of

positions to be filled during the budget year and program year. The estimates were based on the DA October 1984 PBG, the CIVPERSINS Report, TAADS documents, and field input. Following is a summary of high-grade positions and average GM/GS grades:

	Actual FY84	Estimates FY85	FY86
Senior Executive Service	127	150	150
GM/GS-13 and above	11,472	12,030	12,073
Average GM/GS Grades	8.91	9.03	9.03

(U) FY85 Overtime Review and Analysis (R&A). Commands and activities submitted quarterly projections on overtime use for FY85 in October and reports of actual use of overtime were submitted at the end of each quarter. By the end of the second quarter of FY85 overtime utilization was 4.7 percent of the total payroll.

Total Army Analysis (TAA)-92 (U)

(U) AMC submitted the TAA-92 report to HQDA (DAMO-FDF) on 7 August 1985.[18] The report contained AMC major unresourced manpower requirements, civilian and military. It should be noted that the TAA-91 report in FY84 contained only military requirements. The TAA-92 report covered FY87 through FY92 and was staff developed by HQ AMC based on the review and update of issues previously submitted in TAA-91, PARR FY87-91 and the FY86-87 COB. Also considered was the possible impact of changes in distribution and fielding plans. Since the HQDA MRIS scrub in June 1985, manpower for the new AMC special areas was expected to appear in the AMC FY88-92 PARR. There were 32 issues considered for input to TAA-92 that were put in priority order, but only the first 11 were submitted.[19] These were divided into three bands—high (4,443 civilians and 302 military), medium (7,231 civilians and 239 military) and low priority (1,609 civilians) for a total of 13,283 civilians and 541 military. AMC input to TAA-92 was reviewed by the General Officer Steering Committee; however, the final outcome was not available at the time of this report.

Program Management 722898 - Management Headquarters Logistics (U)

(U) This account financed HQ AMC and staff support activities, including Service Support Activity, Personnel Support Activity, Field Safety Activity, Installation and Services Activity, Surety Field Activity, Inspector General Activity, and Security Support Activity. This also included Management Headquarters Activities of mid-management commodity commands, including AMCCOM, AVSCOM, CECOM, DESCOM, MICOM, TACOM, and TROSCOM. On 30 September 1985, the actual military strength was 433 and the actual civilian strength was 3,893. Civilian

18 Ltr, AMCRM-PIS, 7 Aug 85, subj: Total Army Analysis - 92.
19 AMC TAA-92 Issues.

workyears were 3,948 and actual expenditures totaled $156.4 million. The DA October 1984 PBG for this program was 447 military, 3,725 civilians and 3,725 workyears. Effective 11 March 1985, the Service Support Activity and the Personnel Support Activity were discontinued and functions were transferred to Headquarters AMC. Effective 1 October 1985, approximately 500 spaces were transferred from RDTE to 722898, based on OSD decision (PBD 270) to transfer all AMC management headquarters activities, except ERADCOM, to OMA financing.

(U) Program Management 722896N - Administration. This account financed the following functions at TECOM, AVSCOM, TROSCOM, TACOM, CECOM, AMCCOM, DESCOM and MICOM: Comptroller Services, Installation Headquarters Administration and Command, Personnel Management Support Services, Organizational Effectiveness, and other Administration.

(U) The actual military strength was 170 and civilian strength as of 30 September 1984 was 1,987; workyears utilized were 2,052, and actual expenditures totaled 85 million. The guidance contained in the DA October PBG was 160 military, 1,834 civilians and 2,000 civilian workyears. The actual civilian strength on 30 September 1985 was 2,010, compared with DA October 1985 PBG of 1,343. There was no manpower ceiling in FY85. Effective 1 October 1985, the base operations accounts would be restructured based upon the Standard Installation Organization. This action was expected to substantially reduce the 722896N account.

RDTE Civilian Manpower Program (U)

(U) The actual onboard civilian strength on 30 September 1984 was 24,406 and workyears utilized were 25,239. This compared with 21,982 CEP and 22,772 workyears in the October FY84 DA PBG. The actual civilian strength on 30 September 1985 was 25,272, compared with the DA October 1985 PBG of 23,860. There was no manpower ceiling in FY85.

(U) Significant changes occurring in the AMC RDTE civilian program for FY85 included decapitalization of AMMRC and HDL in FY85, AMCCOM in FY86, and the transfer of 465 RDTE AMHA spaces to OMA, effective FY86. Additional RDTE civilian manpower requirements addressed in the FY87-91 PARR totaled 3,620 for FY87 compared with 3,844 in the FY87 COB. High priority unresourced requirements totaled 582 and included 219 to meet high priority testing needs at TECOM, 90 for atmosphere research at ERADCOM, 46 for systems support of missiles at MICOM, 41 to support advanced development efforts in the Army-wide Tactical Deception Program at TROSCOM, and 186 other high priority requirements for AMCCOM, AVSCOM, CECOM, AMSAA, AMMRC, BRL, HEL, THAMA, and TMDE Support Group.

Standard Installation Organization (U)

(U) Effective 1 October 1985, based on the Standard Installation Organization, the base operations and the real property maintenance accounts were restructured. The number of functional letter accounts

for base operations increased from 13 to 19. Manpower Programs Section reviewed input from commands and prepared data on manpower which was submitted to DCSPER to restructure the accounts in the DA October 1985 PBG. Also, the section prepared information to restructure the account in the AMC PBG.

(U) Establishment of New AMS Codes for Automation (U) Effective 1 October 1983, DA established new AMS codes for automation. Manpower Programs Section reviewed input from commands and DA PBG prepared Schedule 8 to restructure AMS codes for manpower (approximately 2,400 spaces) which were reflected in the DA October 1985 PBG, and prepared data to restructure the codes in the AMC October PBG. The Section also reviewed TDA data and prepared Schedule 8 to transfer spaces (331 in FY86 and an additional 148 in FY87) to the Information Systems Command, effective 1 October 1985.

(U) Life Cycle Software Engineering Support (LCSE). Effective 1 October 1985, based on a change in funding policy. all Life Cycle Software Engineering Support (LCSE) spaces were transferred from OMA to RDTE. The manpower Programs Section obtained the necessary data on manpower assigned to the LCE Centers and implemented changes in the AMC PBG.[20]

Productivity Management Division (U)

AMC Productivity Program Management (U)

(U) AMC launched RESHAPE in April 1980 as an innovative solution to the workyear shortfall. RESHAPE was originated as a program aimed at increasing output. As of FY85 RESHAPE evolved into AMC's Productivity Program and serves as the umbrella encompassing all productivity initiatives within the command that gain workyears and achieve dollar and labor savings. The emphasis of the centralized effort is on long term productivity improvements. As such, it is the pivotal program to develop higher productivity in the wholesale logistice base of the Army. These efforts provide vital support to the workload burden faced by all major facets of AMC including the research and development community, supply, maintenance, engineering, procurement, production and others.

(U) It is AMC policy, and the fundamental incentive of the AMC Productivity Program, that savings originating in commands remain with the commands for reapplication to high priority unfunded requirements. However, the challenge for FY85 was to develop a useful and meaningful mechanism to accurately track hard dollar savings throughout AMC and clearly indicate how these savings were reapplied against priority unfinanced resource requirements. By the close of FY85, a mechanism had been established in all major subordinate commands (MSCs) for reporting to begin in FY86.

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20 Force Development Historical submittion, FY85.

Model Installation Program (MIP) (U)

(U) AMC is an active participant in MIP, an innovative management experiment designed by the Department of Defense to improve services and facilities at military installations. MIP was initiated by DOD to encourage the Services to allow installation commanders to try new ideas. Specifically sought are better ways to organize and operate in order to achieve excellence in supporting our personnel by letting the installation keep any savings to improve local services and facilities.

(U) In 1985 there were 29 installations enrolled as model installations: ten each from the Army and Air Force and nine Navy (including four Marine Corps). AMC was active in the program since its inception. By January 1984, Anniston Army Depot (ANAD) and Aberdeen Proving Ground (APG) were in the program, and New Cumberland Army Depot (NCAD) followed in February 1985.

(U) An important element of this program allowed the participating installation to request a waiver from any regulation or policy if the commander believed that increased effectiveness or efficiency would result. AMC's Model Installation Program generated hundreds of requests for waivers. HQ AMC approved 90 percent of those it had reviewed, and 87 percent had been approved by HQDA or higher authority. OSD would be requesting that Congress waive public laws which would allow the Model Installations: to work from one consolidated appropriation fund rather than multiple funds, to lease/buy non-technical vehicles locally, to sell excess real estate to the highest bidder, to obtain venture capital from the private sector, and to rehabilitate installation facilities. The amount of deregulation and innovation that would be achieved would be determined by the enthusiasm at the installation level and the support from the top management.

Productivity Gain Sharing (PGS) (U)

(U) Developments in the PGS area were slowed due to increased emphasis in other participative management-based productive improvement initiatives. Nonetheless, in April 1985 the Commander, AMC, decided to install PGS as a permanent program. After deliberations with key MSCs, preliminary implementation guidance was issued, which allowed the command to use PGS under certain conditions. AMC's experience with PGS provided a basis for GAO's informal recommendation to Congress to pursue PGS as a high-level productivity initiative. Also, OSD, based largely on AMC's PGS tests, published implementation guidance for PGS programmers (DOD Guide 5010.31, March 1985).

Quality Circles (QC) (U)

(U) FY85 saw significant change in the command's QC program. As a result of Chief of Staff, Army visits to Corpus Christi and Anniston Army Depots, several impacts on the program were witnessed. First, AMC was directed to be the Army's lead in the QC area. Second, the AMC program was directed to be expanded and enlarged. In August 1985, AMC

produced the first ever Army-wide QC conference designed to increase QC use throughout the MACOMs. Also, AMC provided continuing consulting service to Army and other Federal agencies on a range of QC issues from implementation to auditing. Also in August the first-ever AMC-wide QC workshop was convened to outline approaches to program expansion, enlargement and cohesion. In response to this meeting and earlier drives, the program expanded over 20 percent in FY85. At the close of the fiscal year there were over 500 Circles encompassing over 4500 employees. Tangible and intangible benefits from the program were varied and many. Documentable savings in excess of $3,000,000 were anticipated, which would yield a return on investment ratio of nearly 3 to 1.

Defense Regional Inter-Service Support (DRIS) Program (U)

(U) The DRIS Program, formerly titled Defense Retail Inter-Service Support, was designed to promote inter-Service/departmental/agency support, and improve effectiveness and economy by eliminating duplicate support services without jeopardizing mission accomplishment. The existing program was more rigorous, incorporating costing savings and Joint Inter-Service Resource Study Group (JIRSG) efforts. JIRSG procedures assured systematic review of base operations support functions. The existing program was promulgated by a DOD regulation (DOD 4000.19R). DRIS program management, within AMC, was transferred to Deputy Chief of Staff for Resource Management (then Comptroller) from Deputy Chief of Staff, Engineer (then Director of Installations and Services) in late August 1984. The DOD DRIS database maintenance function was transferred to Rosslyn, Virginia from Battle Creek, Michigan during the first quarter of FY85. In the transference over half (about 780 of 1,361) AMC support agreements were lost from records, and required reconciliation efforts through early August, 1985.

(U) At the Joint Logistics Commanders' (JLC) meeting on 11 January 1985, the Commander, AMC proposed a Joint Agreement on the Costing of Wholesale Inter-Service Support Agreements he signed. General Thompson had strongly supported costing wholesale inter-Service support agreements when he was the Army's Deputy Chief of Staff for Logistics. The US Navy representative to the JLC opposed the proposal, and it was not signed.

(U) Army Regulation 5-16, Army Supplement to Defense Regional Inter-Service Support (DRIS) Regulation (DOD 4000.19-R), 21 August 1985 was received by most Inter-Service Support Coordinators in September. This AR consolidated DRIS policy which had been disseminated in numerous responses to questions from the field.

(U) During the year, the most significant change in program figures was increased DRIS savings (cost avoidance) recorded, attributable to costing existing agreements in the routine review-revision schedule.

Description	FY85	FY84	Change
Number of agreements	1,351	1,359	-0.6%
Value ($000, Reimb + nonreimb costs)	298,465	264,045	+13.0%
Savings ($000, Total to Federal Govt.)	76,600	21,599	+254.6%
Agreements to be recosted	680	1,005	-32.9%

AMC Productivity Capital Investment Program (U)

(U) AMC operated a consolidated Productivity Capital Investment Program consisting of the DA Productivity Enhancing Capital Investment Program (PECIP), DA Quick Return on Investment Program (QRIP), OSD Productivity Investment Funding (OSD PIF), and AMC RESHAPE investment funding. The purpose of the consolidated program was to reduce operating costs through timely investments for capital tools, equipment, and facilities. In FY85, AMC was able to fund $17 million in productivity enhancing projects which were expected to realize long term savings of over $190 million. The AMC Productivity Capital Investment Program was a viable avenue for AMC to improve readiness through technology and industrial modernization.

(U) While inadequate funding remained a concern of the AMC Productivity Capital Investment Program, emphasis placed on obligation rates was disconcerting. AMC began FY85 with $142.9 million in unfinanced productivity improving requirements. With approximately only 12 percent of these funded in FY85, requests for additional money were receiving unfavorable consideration due to low obligation rates appearing in official finance and accounting reports. Lag experienced between actual obligation and its appearance in the reporting system was not recognized at higher levels.

Subject Matter Assessments (SMA)/Manpower Staffing Standards (MS-3)

(U) Significant results were achieved from eight Subject Matter Assessments (SMA) completed in AMC during FY85. These SMAs, conducted in functional areas such as: Cataloging, Spares Budget Management, Developmental Contracts, Spare/Repair Parts Requirements Determination, Special Maintenance Engineering Programs, War Plans/War Reserves, and New Equipment Training, were expected to realize potential savings of $51.8 million to the Army. Since these SMAs had included or affected other MACOMs, to include USAREUR, the SMA benefits would have a major impact on the Army's combat readiness posture. Seven other SMAs were

started during FY85 and would be completed in early FY86. Implementation of these SMAs would also greatly improve AMC's productivity, efficiency and readiness.

(U) Other notable achievements were the completion and approval of a manpower staffing standards (MS-3) study in item management, and the evaluation and application of a cost comparison model (COCOMO), a manpower resource model to determine manpower requirements for AMC Life Cycle Software Engineering Centers. The COCOMO model was being studied at DA for application in all Army battlefield and management information systems centers. Two other resource model evaluation studies were ongoing. One model was being evaluated for use in determining manpower resource requirements for the USA Security Assistance Center, which would eventually have application for all Army security assistance organizations if feasible. The other model was a resource allocation management aid, under contract with Orkand Corporation. This model was being evaluated to determine its suitability for use in the manpower requirements determination process. A number of SMAs completed in FY85 were to be followed by an MS-3 study in FY86. Those scheduled to start on 1 October 1985 were New Equipment Training and Central Procurement and Production - a follow-on to the Acquisition and Procurement Task Force Study conducted in FY84. An MS-3 in the Cataloging and Distribution and Transportation functions was scheduled in FY86.[21]

Office of Management and Analysis (U)

(U) Analytical initiatives institutionalized during 1985 improved the quality of information available within AMC and the Army. The Management and Analysis Office assumed a leadership position within the Army logistics analysis community, expanded analytical support to PMs, presented quality papers at the Army Operations Research Symposium, improved communications within the analytical community through computer networking, increased Defense Logistics Studies Information Exchange (DLSIE) coverage of analytical efforts, published a procedural book on studies analyses and models, established an Operations Research Systems Analyst subprogram in the Engineer and Scientist career program and received the Army's Group Systems Analysis Award.

(U) Actions taken to further strengthen the AMC Internal Controls Program were taken in the areas of program administration, training, written guidance to the staff in the field, interim checklist distribution and follow-on audits of corrective actions. Accomplishments were tracked throughout the year by quarterly reports and staff overview. Reported and projected accomplishments through the application of internal control principles were achieved in the areas of acquisition, foreign military sales, industrial preparedness, procurement, personnel, contracting, safety and automatic data processing. During the year the Army's program concept underwent a change. The change entailed the development of a functional checklist

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21 Productivity Management Division historical submission, FY85.

for each of the Army regulations which prescribe controls. AMC fully supported the reorientation of the program and assisted in several checklist development efforts. Significant support was provided to the HQDA program effort in the areas of training and program development.

(U) During the year the Office of Management and Analysis participated in a headquarters efficiency effort through restructuring the staff and command. This effort was undertaken in order to satisfy the Army's requirement for additional spaces, meet CSA's guidance, satisfy HQDA PBG direction, reduce layering and redundancy, and to reduce the number of high grade positions. The restructuring would be achieved over a three year period, beginning in FY86 and continuing through FY87-88. The resultant AMC on-board strength would match revised authorizations by the end of FY86. Also AMC would match existing overhires to authorized vacancies by that date. These results would be achieved through attrition with no reductions in force or individual downgrades.

Analysis Division (U)

Study of Specifications and Standards (U)

(U) A study aimed at improving the development, maintenance, and application of specifications and standards was chartered by AMCDMA on 1 July 1985 and completed by December 1985. The study group was composed of representatives from HQ AMC and AMSAA. The following areas were identified as requiring additional emphasis: automation, cost drivers, review process, training, source control drawing, and visibility.

High Technology Command Functions (U)

(U) This program was initiated in 1984 to transfer high technology solutions to common problems among MSCs. In 1985, the MSCs completed the review and adoption of projects from the 133 projects not subject to intensive management. A total of 83 projects were adopted at the MSC level; this represented an adoption rate of over 60 percent. Eight projects were selected for intensive management.

Management Review of US Army Satellite Communications Agency (SATCOMA) (U)

(U) As a result of the conclusions reached in studies sponsored by Army DCSOPS and ACSIM regarding Army satellite communications, and also because of perceived problems with the development and acquisition strategies of SATCOMA's programs, the Deputy Commanding General for Research, Development and Acquisition directed a management review of SATCOMA by HQ AMC. The review was conducted during September and October 1985 under the supervision of the Deputy for Management and Analysis. The study provided conclusions and recommendations regarding SATCOMA's command placement, organizational structure, manpower, and equipment management.

Review of Navy and Army Materiel Organizations (U)

(U) On 9 April 1985, Secretary of the Navy, Lehman, announced that the Naval Materiel Command (NAVMAT) would "simply disappear" on 9 May. How the Navy could abolish its materiel support headquarters with such alacrity was of natural concern to the Department of the Army. An analysis was conducted to examine the Navy decision. The study reviewed the history of Naval materiel support, and contrasted it with Army's materiel and logistics structure. It was concluded that NAVMAT and AMC were formed differently under different environments, operated differently and provided different value.

Office of Management and Analysis Automation Plan (U)

(U) Original Automation Plan of November 1984 was updated in October 1985 to cover addition of Mission and Organization Division to DMA, support for the System Analysis Project Office, and to include portable computers. The FY87-91 Acquisition Funding Profile was completed on 4 December 1984. BCE funds were found and a 16-user micro computer system procured for the Analysis Division. Two IBM PC-XTs were received by the Resource Analysis and Evaluation Division in December 1984. A terminal to the AMC computer was installed in the technical library in March 1985. The FY87 Office of Secretary of Defense-Productivity Improvement Funding Program (OSD-PIF) request was submitted in May 1985.

Review and Analysis Division (U)

AMC Internal Controls Program (U)

(U) Over the past year, the US Army's program concept underwent a change, which entails the development of a functional checklist for each of the hundreds of Army regulations that prescribe controls. AMC supported the reorientation of the program and was assisting in several checklist development efforts. Significant support was provided to the HQDA program effort in the areas of training and program development. AMC also met on a periodic basis with HQDA staff functional proponents, such as Deputy Chief of Staff for Logistics and Deputy Chief of Staff for Research and Development to address plans for implementation of the revised concept, specifically in the area of lending support in the development of functional Internal Control Review Checklist. Actions were taken to further strengthen the AMC program in the areas of program administration, training, written guidance to the staff and field, interim checklist distribution, and follow-up audits of corrective actions. Accomplishments under the program were tracked throughout the year by quarterly reports and normal staff overview.

(U) Reported and projected accomplishments through the application of internal control and principles were achieved in the areas of acquisition, foreign military sales, industrial preparedness, procurement, personnel, contracting, safety, and automatic data

processing. The command continued to build on the administrative foundation of the program. Valuable administrative policy guidance, operating instructions, and informational issuances were distributed and an active interchange of information was begun between the headquarters and its elements, to include training.

(U) Lessons Learned Program. In May the Review and Analysis Division initiated an AMC Lessons Learned Pilot Program, which covered the integrated logistic support and force modernization fields and included three MSCs: AMCCOM, MICOM and TACOM. The pilot program was administered by the Materiel Readiness Support Activity (MRSA) with all automated data stored at the Defense Logistics Studies Information Exchange (DLSIE). MRSA submitted a proposed draft Lessons Learned regulation to HQ AMC for staff review and comment.

(U) Program/Project/Product Management (PM) Criteria. Criteria for the termination of PM management offices and the transition of equipment from PM management to functional management were developed. The procedures for accomplishment of required actions were also developed.

(U) Program/Project/Product Matrix Management. The development of the PM termination criteria led to an analysis of PM management methodologies. It was discovered that the separate PM TDA centralized management practices in effect were labor, facilities, and equipment. Centralized PM also resulted in extensive duplication of like functions being performed at the same location by a series of independent PM offices operating with separate TDAs; an excessive number of high grade positions were also discovered. It was concluded that the PM termination criteria would not be effective in the PM centralized management environment because PM personnel were assigned to separate PM TDAs on a permanent basis. Therefore termination of a PMO would result in the release of the civilians assigned to that office.

(U) Action was initiated to cancel PM TDAs and reduce PM offices to management staffs only. All other PM personnel would be transferred to functional support organizational elements within the MSCs. PM would be fully supported by MSC functional organizational elements. A cost system was also introduced that required PMs to operate within a budget and cost system.

(U) Four Year Development Concept. This project consisted of the identification of criteria and formulation of direction for MSCs to accelerate the weapon system development cycle to a four year period. The project included identification of 32 criteria items, formulation of a matrix to show specific responses from MSCs to the Commanding General's development criteria, and an assembly of a list of weapon system candidates from each MSC which were selected for the four year development cycle. A Commander's Guidance Statement (CGS) was also prepared to provide direction to MSC commanders and headquarters DCSs on responses expected to his directed actions. Task assignments were prepared for tracking of weapons systems development status and the periodic reporting of their progress to the commanding general.

(U) Scientists and Engineers involvement in the Research and Development Procurement Process at AMC Laboratories. This analysis examined that portion of procurement work accomplished by scientists and engineers at AMC laboratories in order to obtain required contract assistance from the private sector. The analysis measured their degree of involvement, manhours used per procurement package, manyears per laboratory center, and manyear utilization trends over a three year period. The analysis also examined operating procedures, document preparation, and problem areas. The analysis also developed possible courses of action to minimize the non-technical workload for scientists and engineers.

(U) Comprehensive Review of Reports. The Comprehensive Review of Reports, initiated at the Commanding General's direction on 31 August 1984, was completed on 30 April 1985. Over 900 reports were reviewed. Of these, 300 were deleted from the AMC reports register as obsolete or unnecessary requirements. The AMC staff negotiated cancellations of four Department of the Army (DA) and two Department of Defense (DOD) reports. Cancellation or modification of 27 other DA or higher level reports was recommended to HQDA. Responsibility for the reports control function at HQ AMC was passed to the Deputy Chief of Staff for Information Management (DCSIM) on 20 May 1985. DCSIM was tasked to revitalize the reports control program in AMC and to follow up on recommendations and incompleted actions resulting from the review.

(U) Army Integrated Publishing Network (AIPN). In October 1984 the Commanding General tasked the Deputy for Management and Analysis to look at the proposed Army structure of integrated publishing, recommend a headquarters organization for publishing/publications management, and apply a similar analysis leading to an integrated structure for field elements. This office prepared a milestone chart indicating that a separate headquarters publishing management function could be in operation by August 1985. Personnel and manpower resources drawn from the headquarters staff who were then engaged in managing the publishing and publications functions were recommended as the base from which to develop the new integrated publishing organization. The completed analysis proposed the establishment of a provisional headquarters element placed under the direction of the Deputy Chief of Staff for Supply, Maintenance, and Transportation (AMCSM) as an interim step pending full integration at a later date under the Deputy Chief of Staff for Information Management. In February 1985 a Summary Sheet was prepared for AMC Chief of Staff approval to establish a provisional publishing management organization under the AMCSM. An alternative proposal from the Deputy Chief of Staff for Information Management (AMCIM) to establish publishing management directly under AMCIM was approved by General Thompson.

(U) Command Review and Analysis. HQ AMC Command Performance Indicator Review (CPIR) System, established by the Commanding General (CG) AMC, in August 1977, was restructured into the Command Review and

Analysis (R&A) System. This new process was the primary system for measuring performance toward the accomplishment of AMC's mission, goals and objectives.

(U) Performance Indicator Review Process. A complete review of all R&A performance and workload indicators used in the Command R&A commenced during FY85. The reviews evaluate R&A input in relation to missions and functions and identify indicators that reflect performance/workload for each area.

(U) Kirwan Report II. The CG AMC directed that an independent board be formed to review the doctrine, practices, and procedures relative to the overall effectiveness and adequacy of current programs to assure the production of top quality products during the acquisition process. The board's report contained 16 issues and a total of 58 recommendations. At the request of the DCS for Product Assurance and Testing, the R&A Division assisted in this effort by developing a management system to track the progress of accomplishment of the recommendations and to serve as a basis for periodic reporting to the CG AMC.

Studies Management Division (U)

(U) Systems Analysis Offices (SAO) Review. An analysis of AMC MSC's SAOs was conducted to compare sizing and structure, develop a "core" organization structure, develop "type" functional statements, and make recommendations on staffing regarding total number, skill mix, and military/civilian mix. A final report was submitted to the CG in January 1985. In a letter, dated 24 January 1985, distributing the review package, the MSCs were to ". . . develop a plan to bring your systems analysis office into line with the recommendations insofar as possible." The MSCs expressed general agreement with the recommendations presented in the review and in some cases had already taken positive actions to improve their SAOs. This effort did not result in identical SAOs at every MSC, but it caused each command to take a serious look at its approach to, and use of, systems analysis.

(U) AMC-R 672-3, Commanding General's Award for Installation Excellence. The R&A Division which was the proponent for AMC-R 672-3, revised it in September 1985. The award recognizes an installation/activity which has made outstanding achievements in productivity and efficiency. Out of eight nominations which were received for the first award presented under this regulation, Anniston Army Depot was awarded first place. Runners-up were the Materiel Readiness Support Activity and Sharpe Army Depot. The award was presented at the Commander's First Annual Recognition Day ceremony, 23 May 1985.

Studies Management Division (U)

(U) Managing Analytical Support Services (MASS). Analytical Support Services are managed under the provisions of AR 5-14 and consist of individual appointed and contracted experts and consultants,

contracted studies and analyses, and contracts for professional and management support services. DOD's use of these services continued to receive congressional scrutiny and was highlighted every year in the Defense Appropriations Act. All AMC contracts for analytical support services were supported by a formal Management Decision Document approved by a General Officer or a member of the Senior Executive Service. AMC's FY85 Analytical Support Services program amounted to $47.2 million in 64 contracts.

(U) Army Commanders' Conference (ACC). The Chief of Staff, Army (CSA), schedules three ACCs each year. Two conferences, in the spring and summer, include only the four-star Army Commanders (TRADOC, AMC, FORSCOM, USAREUR, KOREA). The purpose of the Spring Conference, held on 28-30 March 1985, was to obtain four-star commanders' recommendations on what should and should not be resourced. The Summer Conference (12-13 August 1985) was related to budget, POM, and productivity issues. The purpose of the Fall 85 Conference (16-19 October) was to set goals and to plan for the future with emphasis on the current and near years and to receive commanders' views on the Army Plan and their plans.

(U) At the Spring Conference, the AMC Commander, General Thompson, discussed issues such as Reliability, Availability, Maintainability-Durability (RAM-D); unreasonable pricing; Support of Operations Forces (SOF); test and evaluation process; sample data collection (SDC); and multi-media satellite education network.

(U) At the Summer Conference, General Thompson discussed three issues: Results of the Headquarters AMC Staff Review; Force Modernization; and Acquisition Climate and Impact on Procurement. The theme of his presentation at the fall ACC was "How You Can Help Me To Help You." His two key concerns were safety of items supplied and efficient managements of resources.

(U) AMC Commanders' Conference (AMCCC). Similar to the concept of three AMCCC each year, the Commander, AMC convenes three conferences per year, normally subsequent to each ACC. The Spring Conference was held at TECOM on 9-10 April 1985 and the Summer Conference at CECOM on 12-13 August 1985. The Fall Conference was hosted by the Commander, DESCOM at Corpus Christi on 8-9 January 1986. The agenda for the first day of the Spring Conference included the following topics: Leadership; AMC Test Policy (presented by General Thompson) and status; HQ AMC Test Information Center; Continuous Evaluation Handbook; Certification of Test Facilities; Test and Evaluation Functional Area Assessment; Environmental Stress Screening; AMC Quality Circle Program; Subject Matter Assessment Program; Warranties; TROSCOM's Role as Lead MSC for SOF Support; Lessons Learned in Quality; AMC Savings Tracking System; Audit alert Network Matrix; Transition to the Information Systems Command, Army Materiel Plan Modernization; AMC LOG 21 MAA Status; AMC Strategic Long-Range Plan; Scientific and Engineering Personnel Initiatives; Army CM/CCM and Survivability Management Concept; Materiel for Low Intensity Conflict Situations; Position Classification; Competition in Contracting Act of 1984 (CICA); TACOM

Reporting Acquisition Control System (TRACS); Serial Number Tracking System; Depot Maintenance; Army Command Control System (ACCS) System Engineering Program; Force Modernization/Displaced Equipment Lessons Learned; Historical Review of Workloads (Funds Execution vs Personnel) and an Executive Session. In the Executive Session, General Thompson discussed: OCONUS Travel; PM/Materiel System Assessment Program; Green Book Weapons Directory; AMC FY84 Sick Leave Usage; Implementation of AMCMEA Task Force Report and Secure Environment Contracting.

The Army Study Program (U)

(U) Studies and Analyses contribute to a greater understanding of relevant issues and lead to conclusions and recommendations for use by decision-makers. AR 5-5, Army Studies and Analyses, dated 15 October 1981, established policies, procedures, and responsibilities for the administration and management of the Army Study system. AMC's participation in the Army Study Program is summarized in the table below:

FY85 Study Program	Number of Studies
In-House	47
Contract	7
FY85 Resource Estimates	
In-House	44.4 Professional Staff Years
RDTE Contract	$581K

(U) Quality Control of Analytical Studies. AMC studies are the basis for important decisions on weapons systems, logistics support and internal management. This places a responsibility on the Command, its analytical organizations, and its analysts to produce quality studies. Accordingly, quality control of analytical studies was one of AMC's major initiatives.

(U) A policy letter on quality control was distributed to major subordinate commands, separate reporting activities, and HQ AMC Deputy Chiefs of Staff and Separate Staff Office Chiefs. The letter provided key criteria that had to be addressed during the study process, stated review procedures to be followed to assure product quality before distribution, and directed all addressees to report actions they had taken to upgrade the quality of AMC studies.

Army Materiel Command Directions (AMC/D) (U)

(U) DARCOM Directions (D2) were renamed AMC Directions (AMC/D) Thrusts on 1 August 1985. On 23 August General Thompson, Commander, AMC, directed the Deputy for Management and Analysis to review and revise the 26 AMC/D Thrusts. Each Deputy Chief of Staff or Office Chief responsible for an AMC/D Thrust in turn reviewed his respective thrust; and recommendations and lessons learned were incorporated in the 3QFY85 and 4QFY85 AMC/D Thrusts.

AMC Program Plan (U)

(U) Guidance for new policy and procedures for the AMC Program Plan was issued to the major subordinate commands, separate reporting activities (SRA), and Program/Project Managers on 9 July 1985. Each MSC, SRA and PM was tasked to develop and submit a Program Plan by 15 October 1985, later extended to 22 November 1985. The AMC Program Plan was to be based on the MSC, SRA and PM Program Plans as well as the headquarters' submission. HQ AMC would develop a plan of action for FY86 based on the AMC objectives. The AMC Program Plan was expected to be published in 2QFY86, and would directly impact the AMC/D Thrusts.[22]

Technical Library (U)

Automation (U)

(U) The HQ AMC Technical Library advanced its long term commitment to automation during FY85 by securing an ADM-42 from the Analysis Division and by completing the required paperwork to hard wire the ADM-42 terminal into the UNIX mainframe in G-3. Additionally, all staff were enrolled in one of the week-long "UNIX for functional users" courses offered by Civilian Personnel Office. By year's end new computer furniture had arrived and was installed to complete the library's online work area and a Wyse terminal was purchased and installed to update the ADM-42. To prepare for the completion of all library services online, the technical library staff arranged and participated in demonstrations from three largest library vendors: GEAC, DYNIX and LS-2000. Each of the three vendors had an integrated library system that was capable of converting all library operations to online. These operations included the card catalog, circulation, reserves, overdues, and acquisition functions. Administrative paperwork to complete the library's total online conversion was expected to continue through FY86 with target date installation in FY87.

Library Tours/Orientation (U)

(U) The Technical Library has a continuing educational role to explain its resources and services to HQ AMC employees. Every month one of the librarians briefs new AMC personnel at the new employee orientation. In addition to these informal briefings, the Technical Library scheduled formal tours and orientations for Deputy Chiefs of Staff and Chiefs from 18 March to 18 April 1985. The tours and online computer demonstrations were so popular that, at the suggestion of one DCS, the program was expanded to include all action officers. Eight tours were scheduled for action officers completing week-long courses at Fort Belvoir from 13-16 May and four additional tours were scheduled over 16-17 September 1985. Online demonstrations were a part of the tours.

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22 Office of Management & Analysis, historical submission, FY85.

Online Services (U)

(U) DIALOG. DIALOG is a powerful commercial network of over 250 databases consisting of more than 100 million records of information. To support the mission and function needs of AMC's personnel, the Technical Library performed a total of 183 DIALOG literature searches online.

(U) DTIC. The Defense Technical Information Center, located at Cameron Station, is the online database network of military and contractor generated reports, and used to produce 60 custom tailored bibliographies for HQ AMC personnel. Two-hundred-twenty-eight documents were ordered as a result of library patron requests on paper or microfiche copies.

(U) DLSIE. Defense Logistics Studies Information Exchange, located at Fort Lee, Virginia produces custom-tailored bibliographies on a variety of logistics and defense related subjects. Requests are made by librarians in response to specific requests by HQ AMC personnel. Materials are ordered via autovon, and all reports are procured on microfiche. Twenty searches were completed in FY85.

Collection (U)

(U) Acquisitions. One thousand two hundred ninety-one clothbound and 330 paperbound bibliographic volumes were added to the collection. Concentration was in the areas of management, computer science, military science, and reference.

(U) Weeding. One thousand five hundred fifteen clothbound and 273 paperbound volumes were weeded from the collection and transferred to other AMC libraries or sent through the excess property process to the Library of Congress. Most materials were weeded because they were no longer current, had been updated by newer editions, or were badly worn. In preparation for an integrated library automation system, 1,000 titles were examined for usefulness of information and either discarded or added to the automated Online Computer Library Center (OCLC) computer. The OCLC system enabled libraries to borrow and loan materials to each other and increases inventory control.

(U) Congressional Information Service (CIS). A complete set of microfiche materials consisting of congressional documents for CY84 was added to the collection. CY85 materials were being received monthly and added to this new collection as well. Senate, House of Representatives, Joint Publications, and Public Laws were arranged by subject with complete cross reference for easy access.

(U) Bibliographies/Displays. During FY85 the Technical Library prepared printed, in-house bibliographies for subject areas which were of interest and which significantly assisted AMC personnel with information needs. Bibliographies included such subjects as UNIX and

Leadership; a monthly New Books List; a new bulletin board was prepared monthly; and a Black History Display was prepared for February 1985.

(U) Staffing/Training. A new Chief of the Technical Library and one new technician were recruited during the second quarter of FY85. Due to the large number of daily reference questions and requests for online literature searches, one technician slot was converted from the 1411 series to the professional 1410 series.[23]

Resource Evaluation Division (U)

Regulations Published (U)

(U) Two regulations were published in FY85. AMC-R 10-2, HQ AMC Organization, Mission and Functions Regulation, was published April 1985 as a result of the FY84 reorganization. AMC-R 5-6, Matrix Management, was published in April 1985 to incorporate the information (Chapter 2) of DARCOM-R 10-2, HQ DARCOM Organization, Mission and Functions Manual. Chapter 2 (Matrix Management) was deleted from DARCOM-R 10-2 when superseded by AMC-R 10-2.

Commercial Activities (CA) (U)

(U) Four CA studies were completed in FY85. The US Army Missile Command (MICOM), Redstone Arsenal Support Activity (RASA), Huntsville, Alabama contractor became operational on 1 October 1985. The other three resulted in continued in-house performance: MICOM automatic data processing data entry/data transcription function, Huntsville, Alabama, most efficient organization (MEO) became operational on 1 October 1985; the US Army Management Engineering Training Activity (AMETA), training support function, Fort Lee, Virginia, MEO, became operational on 1 October 1985; and the US Army Armament, Munitions, and Chemical Command (AMCCOM), data entry/data transcription function, Rock Island, Illinois, MEO, became operational in December 1985.

Separate Reporting Activities (SRA) Study (U)

(U) This office initiated a management study of AMC SRA in 1984 at the request of the AMC Commander. During 1985, the data collection and analysis effort, begun in 1984, continued. At the study's inception, its scope extended to 42 SRA. As a result of the study, the number was expected to be reduced to 28 by 1 January 1986. Another result of the study was AMC Command Group approval of findings and recommendations, applicable to performance indicators and other management improvements, for 10 of the SRA. Other products under development were an SRA Standard Resource Management System and SRA Customer Satisfaction Surveys as a means of evaluating the quality of SRA performance.[24]

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23 Technical Library, historical submission, FY85.
24 Resource Evaluation Division historical submission, FY85.

Mission and Organization Division (U)

Reorganization and Redesignations (U)

(U) Reorganization of US Army Electronics Research and Development Command (ERADCOM). ERADCOM was provisionally redesignated the US Army Laboratory Command (LABCOM) on 1 July 1985. As a result, LABCOM received operational control over US Army Materiel and Mechanics Research Center (AMMRC), Watertown, Massachusetts; US Army Ballistic Research Laboratory (BRL), Aberdeen Proving Ground (APG), Maryland; US Human Engineering Laboratory (HEL), APG, Maryland; and US Army Research Office (ARO), Research Triangle Park, North Carolina. All were transferred from HQ AMC. The redesignation and reorganization of ERADCOM was to become permanent on 1 October 1985.[25]

(U) Reorganization of US Army Communications-Electronics Command (CECOM). The following were removed from HQ ERADCOM and placed under the operational control of CECOM on 1 July 1985:

US Army Night Vision and Electro-Optics Laboratory (NVEOL), Fort Belvoir, Virginia.
US Army Combat Surveillance and Target Acquisition Laboratories (CSTAL), Fort Monmouth, New Jersey.
US Army Electronics Warfare Laboratory (EWL), Vint Hill Farms Station, Warrenton, Virginia.
US Army Electronics Research and Development Command, Technical Support Activity, Fort Monmouth, New Jersey.
US Army Electronics Research and Development Command, Flight Test Activity, Lakehurst, New Jersey.
US Army Electronics Research and Development Command, Tactical Software Center (ETSSC), Fort Monmouth, New Jersey.
US Army Office of the Product Manager for Modular Integrated Communication Navigation System (MICNS), Fort Monmouth, New Jersey.

These changes were accomplished without any physical change of location.[26]

(U) USAMC Intelligence Materiel Activity (USAIMA). USAIMA, organized on 15 January 1985, as a subordinate activity of the Deputy Chief of Staff for Intelligence (DCSI), HQ AMC. Its mission is to perform that part of the AMC mission pertaining to the quick reaction development, modification, fabrication, procurement, provisioning, maintenance and life cycle management of specialized non-standard intelligence and security materiel, and related processes and techniques required by US Army Intelligence and Security activities and other DOD and governmental agencies. Technical disciplines involved are electronics, photo-optics, security systems and mechanical devices.

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25 Permanent Order 51-1, 19 Jul 85.
26 Ibid.

Manpower authorizations for the new organization were provided from within AMC resources, especially US Army Electronic Warfare Laboratory.[27]

(U) Light Helicopter Family (LHX). The LHX Program was organized on 1 March 1985, with the mission to exercise executive directline authority for the centralized management of the LHX program. The mission responsibility of the PM LHX is to plan, direct and control the allocation and utilization of all resources authorized for execution of the program. Further responsibility is to develop, test, program, produce, deploy and support the LHX throughout its life cycle, execute the LHX program to assure that scheduled constraints are not violated, train operating and support personnel, control costs and manage functional support provided to the program. Manpower resources to support the PM LHX were transferred from HQ AVSCOM.[28]

(U) PM for Amphibious and Watercraft (AWC). AWC was organized on 3 October 1984 and assigned to TROSCOM.[29]

(U) PM for Division Air Defense (DIVAD) Gun System. The US Army Office of the PM, SGT York Air Defense Gun System was organized on 1 October 1984 and assigned to AMCCOM.[30]

(U) Production Base Modernization Activity (PBMA). The US Army Munitions Production Base Modernization Agency (MPBMA) was redesignated PBMA on 1 October 1984 and assigned to AMCCOM.[31]

(U) PM, Tank Systems. The US Army Office of the PM for Tank Systems was established on 25 March 1985 with the mission to exercise full-line management authority and responsibility for development, acquisition, fielding and support of assigned tank vehicles/systems/programs. The PM plans, directs and controls associated TACOM resources to ensure effective program accomplishment. Manpower authorizations for the new unit were provided from within AMC and TACOM resources (OPM, M60 Tanks, OPM Abrams Tank System, and HQ TACOM).[32]

(U) PM, Tactical Airborne Remotely Piloted Vehicle/Drone Systems (RPV). The US Army office of the PM for Tactical Airborne RPV was reassigned on 26 August 1985 from HQ AVSCOM to HQ MICOM. The physical location of the main duty station was changed from St. Louis, Missouri to Redstone, Alabama.[33]

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27 P.O. 12-1, 28 Feb 85.
28 P.O. 18-1, 22 Mar 85.
29 P.O. 20-1, 5 Apr 86.
30 P.O. 6-1, 31 Jan 85.
31 Ibid.
32 P.O. 39-2, 17 Jun 85.
33 AMCR-10-2, HQ AMC Organization and Missions, 1 Apr 85.

(U) PM, Army Helicopter Improvement Program (AHIP). The US Army Office of the PM for the Advanced Scout Helicopter (ASH) was redesignated the Office of the PM AHIP on 21 August 1985.[34]

Housing Management Division (U)

Maintenance and Repair (M&R). (U)

(U) In FY85, increased funding from DA in the amount of $31.2 million in the maintenance and repair account for AMC family housing greatly improved the condition of family quarters. The Deferred Maintenance and Repair Program (DMAR) which had been totally unmanageable was aggressively attacked. Increased emphasis and funding from HQDA led to a reduction of DMAR from $22.4 million in FY84 to $13.9 million at the end of FY85. The HQDA goal of reaching the manageable DMAR level was expected to be reached by the end of FY87.

(U) The cost of ownership for AMC family housing stabilized indicating that installations were fully managing their AFH budgets and were finally planning/programing their M&R requirements both routine and major projects. HQ AMC retained management of DMAR in order to assure that it did not increase.

(U) High Cost Quarters. In 1984 high cost quarters and General Officer Quarters (GOQ) came under congressional scrutiny and new guidelines were established. Any quarters with major maintenance and repair exceeding $15,000 per year or GOQs exceeding $25,000 for operations and maintenance per year had to be forwarded to Congress for review and approval.

(U) The quarters for FY84 and FY85 were approved as required and were repaired. In many instances, once repairs were accomplished the DUs no longer fell into the high cost category.

(U) Several historical quarters fell into the category of high cost also. HQDA sponsored a study of these quarters to determine the existing conditions and future actions to be taken.

(U) Improvements and Construction. HQ AMC was well on its way to eliminating its substandard housing problems and improving its inventory. The FY84 replacement of Chesapeake Gardens Phases 1 and 2, APG (208 units) were expected to be occupied in January 1986. The remaining 439 units were approved for construction in FY85. Construction upgrading the 37 substandard units at Letterkenny Army Depot (LAD) began in September 1985. The turnkey contract for 80 new units at Sierra Army Depot to replace 125 substandard privately owned Wherry units was awarded in September 1985. Actions to buy back the 125 units was pending before Congress. Congressional approval to upgrade the Wherry housing at Fort Monmouth was also granted at $30,000. Final project design indicated reprograming was necessary. The project was resubmitted to Congress as a specific line item with a

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[34] P.O. 85-2, 12 Dec 85.

per-DU authorization of $40,000. Approval was received November 1985. Condition upgrade of AMC housing and projected success of the program are indicated in the chart on the following page.

(U) Housing Operations Management System (HOMES). The HOMES system was being converted from VIABLE to INTEL. Redstone Arsenal and Aberdeen Proving Ground were designated to receive HOMES in FY86. Equipment buys were scheduled by HQDA.

Training (U)

(U) In FY85 eight Army Housing Management courses were held at the Engineer School at Fort Belvoir, Virginia. Forty-three AMC persons received training at these courses.

(U) During the FY85 Housing Management Career Program (HMCP) Planning Board meeting, a major restructuring of the entire housing curriculum into basic, intermediate and advanced courses was approved. Three-person committees (including MACOM and installation functional and non-functional experts) were to be established during FY86 for each course. They would restructure courses to meet careerists' needs. Implementation would take place during FY87.

Retail Logistics Division (U)

(U) During FY85 the Services Division was redesignated the Retail Logistics Division to better describe the functions for which it is responsible.

(U) Excess. Under the Retail Logistics Division guidance, 15,692 line items of equipment valued at $14.4 million dollars were declared excess by AMC installations and activities. A total of 540 line items valued at $5 million (including 109 nontactical vehicles valued at $2.3 million) were redistributed to meet command mission requirements, in lieu of new procurement. The remainder of the excess items were made available to other DOD/government activities through property disposal channels.

(U) AMC Logistics Excellence Program (ALEP). The AMC Logistics Excellence Program, launched in July 1985, paralleled the DOD Model Installation Program, and yielded more than 300 AMC ideas to improve base-level management of working and living conditions. Thirteen AMC installations/activities were selected to participate in this program for a three-year period. They were:[35]

AMCCOM
- McAlester Army Ammunition Plant
- Rock Island Arsenal

AVSCOM
- St. Louis Area Support Center

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[35] Ltr, AMCEN-S, subj: AMC Logistics Excellence Program, 18 Jun 85.

AMC
AFH IMPROVEMENTS PROGRAM
(FY 83 THRU FY 89)

FY	UNITS		REMARKS
83	90		WHERRY UP GRADE DUGWAY PG
84	208		PHASES I & II CHESAPEAKE GARDENS APG
85	707		UPGRADE WHERRY HSG AT FT. MONMOUTH AND LETTERKENNY
			REPLACE WHERRY HSG AT APG
86	539		UPGRADE WHERRY AT FT. MONMOUTH AND DUGWAY PG
			UPGRADE SUBSTANDARD AT APG
87	899		UPGRADE HSG AT APG ★, FT. MONMOUTH, SELFRIDGE ANGB, DUGWAY PG
88	960		UPGRADE HSG AT FT. MONMOUTH, SHARPE AD, YUMA PG, SELFRIDGE ANGB, APG, YPG, SENECA AD JEFFERSON PG, WSMR, AND REDSTONE ARSENAL
89	285		UPGRADE HSG AT FT. MONMOUTH, APG
TOTAL	3688	=	46% OF AMC INVENTORY MINUS SUBSTANDARD UNITS TO BE EXCESSED

★ PROJECTS MAY BE SUITABLE FOR SECTION 801/802 REPLACEMENT HOUSING

CECOM
Headquarters Installation Support Activity

DESCOM
Corpus Christi Army Depot
Letterkenny Army Depot
Red River Army Depot

LABCOM
Harry Diamond Laboratory

MICOM
Redstone Arsenal Support Activity

TACOM
TACOM Support Activity, Selfridge

TECOM
Jefferson Proving Ground
White Sands Missile Range

TROSCOM
Natick Research and Development Center

(U) The AMC Retail Logistics Overview Report was established during FY85 by direction of the CG. It consisted of retail logistics performance charts and its objective was to stimulate competition among the major subordinate commands/installations and provide a management tool for the MSCs and HQ AMC staff. The report was patterned after a similar semi-annual report prepared by TRADOC, and was sent to all MSC commanders.

Support Division (U)

(U) The HQ Support Division was established 19 August 1984 to include the Supply and Transportation, Audio-Visual and Graphics Branches. On 1 October 1985 the Audio-Visual Branch and Graphics Branch were transferred to the Deputy Chief of Staff for Information Management.

(U) More than 2,100 requisitions were processed by the Acquisitions Branch during FY85. In April 1985 a severe shortage of money caused a backlog and only priority requisitions were processed. Over 350 service calls were placed and acted upon for equipment and furniture repair.

(U) A wall to wall inventory was conducted by I&SA and AMC personnel during the September-October 1984 period. The property book was automated and the manual property book was discontinued in November 1984. In December 1985, after a year of operation, the Inspector General, AMC inspected the property book and recommended that manual operation be reinstituted.

Facilities Division (U)

Minor MCA (U)

(U) Ten AMC construction projects were awarded in FY85, totaling $6.8 million in combined program funds:

Installation	PN	Project	Program Amount ($000)
Pine Bluff Arsenal	84E	Toxic Change House Conversion	869
Rock Island Arsenal	96E	Rehabilitate Four Buildings/Mop Shop	836
Picatinny Arsenal	157E	Bldg Alter-Health/ Dental Clinic	806
Letterkenny AD	131E	SCIF Addition B3	325
Aberdeen Proving Ground	328E	Alter/Modify Weapon Process Shop	805
Letterkenny AD	127E	Convert Building to Admin	800
Crane Army Ammo Activity	13E	Modify Projectile Loading Plant	826
New Cumberland Army Depot	80E	Child Development Center	337
Fort Rucker	265E	ADP Building	329
Korea (various)	980E	Upgrade Com-Elec/ Cal Test	903
		Total	$6,836

MCA (U)

(U) Twenty-eight AMC construction projects were authorized and funded in the Military Construction Authorization and Appropriation Acts of 1985, which provided $236,270,000 for construction in AMC.

AMC FY85 MCA Program ($000) (U)

Installation	PN	Project	Program Amount
Aberdeen PG	128	CB Defense Lab	$20,000
	263	Vibration Test Facility	4,950
		Chapel/Child Care Center (MWR)	4,950
	255	Barracks	17,800
Anniston AD	96	Tank Test Rack Modification	2,950
Corpus Christi AD	60	Composite Blade Test Facility	2,200
Crane AAA	9	Ammo Surveillance Facility	3,600
Fort Monmouth	158	Operations Building	3,600
	148	AC Gen Instructional Bldg	4,050
	159	Tactical Equipment Shop	2,900
	150	Barracks Modernization	5,100
New Cumberland AD	78	Site Acquisition/ Preparation	7,800
Picatinny Ars	121	Regional Sewer Connection (WPC)	6,400
	114	Water Treatment Plant	3,000
	156	Railroad Acquisition	380
Pine Bluff Ars	64	Water Treatment Plant	2,550
Radford AAP	60	Red Water Disposal (WPC)	26,000
Red River AD	121	Technical Training Facility	830
Redstone Ars	303	MIA Facility Addition	1,900
Rock Island Ars	86	REARM, Phase II	44,000
	82	Admin Bldg Mod, Phase III	6,900
Seneca AD	86	TSADS	6,900
Sharpe AD	85	Western Distribution Ctr	49,000

Production Base Support (U)

(U) Eighteen projects in the Production Base Support Program included major construction funded from Procurement Appropriations in FY85. The total cost of construction was nearly $48 million, as follows:

FY85 Funded Projects (U)

PROJECT	DESCRIPTION	FUNDED FY85($M)
3852169	Fire Projection, Morton Thiokol	.250
3852209	Rocket Fac Mod, Morton Thiokol	7.8
4856036	PSER, DATP	1.1
7858174	PSER, Stratford AEP	.300
4852006	Mod/Exp, MZAD	13.9
4850021	Site Security, MZAD	2.2
5855328-15	Access Platform, HAAP	.230
5852199	Coal Handling, HAAP	7.0
5852439	Prod Improvements, HAAP	.910
5852054	Mod Comp C-4 Fac, HAAP	3.9
5852159	Prod Chrg Bldg, INAAP	1.9
5855333-13	Blow Out Roofs, IAAP	.690
5855333-16	Envir Contr Sys, IAAP	1.1
5852507	Chem Lab, LAAP	1.6
5852229	120mm Prop Blend, RAAP	.460
5855326-13	Repl Barricades, RAAP	2.150
5855326-21	Repl Barricades, RAAP	.330
5852359	Water Distr Sys, Scranton AAP	2.050
TOTAL		47.87 million

Energy Program (U)

(U) FY85 consumption of Facilities Energy experienced an increase over FY84. As a consequence, AMC exceeded DA's FY85 target by approximately 800,000 MBTU. Three MSCs (CECOM, TECOM and TROSCOM) attained their respective targets in Facility Energy and three MSCs (AVSCOM, DESCOM and LABCOM), while missing their respective targets, reduced or equaled their prior year consumption. Mobility Energy consumption decreased in FY85 resulting in AMC attaining DA's FY85 target by more than 775,000 MBTU. Results are shown below:

	FY85 COMSUMPTION (MBTU)	FY85 DA TARGET (MBTU)	PERCENT CHANGE
Facilities/Process	53,300,645	52,500,000	+ 1.5%
Mobility	2,223,516	3,000,000	- 25.9%
Total	55,524,161	55,500,000	+ 0.04%

(U) FY85 Facilities Energy Goal for AMC was revised by DA from 43.5 trillion BTU to 52.5, following a reassessment of the Army's consumption trend and square footage changes since the FY75 base year. That analysis indicated a higher absolute BTU consumption could be

accommodated, and still meet Executive Order 12003 in FY85. The revision for AMC was based on mission growth, recent trends in energy consumption, and the judgment of the Army Energy Office as to the quality of effort in AMC to save energy.

(U) Helping to portray AMC's situation was a study performed by the Construction Engineering Research Laboratory (CERL). This study produced process energy models based on computerized regression analysis of such variables as production equivalents, labor hours, weather and other factors for which records were available. These models permit AMC to analyze the impact of production variables on energy consumption and forcast future consumption. This technique was briefed to DA and DOD energy managers and accepted as a viable management tool. DOD subsequently recommended other Services look at the feasibility of employing similar management techniques.

(U) Capital Investment Programs to make buildings more energy efficient received continued emphasis. Lack of funding in the tight OMA/PA budgets was still a serious obstacle in implementing projects identified through the Energy Engineering Analysis Program (EEAP). The MCA appropriations for the Energy Conservation Investment Program (ECIP) also continued to fall short of the requirement. AMC initially proposed 28 ECIP projects for FY87 valued at more than $25 million, of which three projects worth approximately $1.6 million remained in the final DA program. Moreover, the survival rate was incorrect, out-of-date, or overly-optimistic savings-to-investment ratios in EEAP-based projects. Sharply curtailed ECIP dollar guidance for FY87 forced many projects into FY88 and subsequent years. DESCOM required each depot to set aside 10 percent of its Annual Work Plan for energy-saving projects.

(U) Energy Awareness activities received continued emphasis through CG messages, letters, commanders' calls, and field trips. Major importance was attached to low-cost or no-cost management actions and awareness programs. The DA Energy Awareness Seminar was brought to: Radford AAP, Holston AAP, Picatinny Arsenal, Rock Island Arsenal, Detroit Arsenal, Sunflower AAP, Letterkenny AD, Red River AD, Anniston AD, New Cumberland AD, Lexington-Blue Grass AD, Ft. Monmouth, and Yuma PG. Several other installations arranged seminars, exhibits and other events to promote the conservation ethic.

(U) Awards for achievements in Energy Management and Conservation were given to deserving installations. For the first time an AMC installation, Anniston Army Depot, won the US Department of Energy (DOE) Energy Conservation Award. Other installations winning HQ AMC Energy plaques were Sharpe Army Depot and Iowa and Badger Army Ammunition Plants. AMC continued to search for ways to provide cash incentives to installations for quality of life improvements similar to programs in FORSCOM and USAREUR, where proceeds from energy savings were given to the installations with the very best programs. AMC had to deal with multiple funding appropriations before an equitable and legal cash awards program could be implemented.

(U) Energy Staff Reviews were conducted by AMC Installations and Services Activity (I&SA) at 13 installations. The energy program at one was judged marginal, four were rated unsatisfactory, and the others were viewed as having satisfactory energy programs.

Environmental Quality Division (U)

(U) The Environmental Quality Division (EQD) of AMCEN manages the Environmental Quality and Pollution Abatement Programs which involve Federal, State and local authorities in their interface with AMC mission activities. While the Clean Air Act and Clean Water Act were the primary costly cleanup laws of the 1960-1970s, the Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TSCA), and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) continued to challenge AMC's compliance and cleanup efforts in the 1980s.

Pollution Abatement Operations Center (PAOC) (U)

(U) Immediately following the Environmental Protection Agency's (EPA) letter to the Secretary of the Army in October 1977 identifying air and water noncomplying installations, General Guthrie established a Pollution Abatement Operations Center (PAOC) operated by EQD. The Center maintained an accurate picture of pollution problems at all AMC installations and tracked the status of actions and corrective projects needed for compliance with environmental laws and regulations.

Environmental Projects Information System (EPIS) (U)

(U) The automated Environmental Projects Information System accelerated input and output of environmental data such as the annual Defense Environmental Status Report and semi-annual Environmental Pollution Prevention, Control and Abatement Report to HQDA. This data base was maintained by contractor to US Army Toxic and Hazardous Materials Agency at Aberdeen Proving Ground, Maryland.

Compliance with Applicable Environmental Quality Standards (U)

(U) The Clean Air Act and Clean Water Act were the expensive driving laws of the 1970s, but the regulations implementing TSCA, RCRA and CERCLA (Superfund), which came to the forefront in FY82, had a major impact on the AMC environmental picture during FY85. TSCA regulates manufacturing, use and importation of chemical substances, including polychlorinated biphenyls. AMC installations store and use large quantities of polychlorinated biphenyls. RCRA and CERCLA addressed present and past management of land disposal of hazardous waste. Under RCRA, AMC was spending several millions of dollars annually to obtain RCRA Part B hazardous waste permits. Under CERCLA, problems at installations with groundwater contamination were quite pervasive.

(U) At the beginning of FY85, AMC had 29 noncomplying installations composed of eight air noncomplying sources, seven water noncompliers, 21 hazardous wastes noncompliers, and one solid waste noncomplier. At the close of FY85, the total number of noncomplying installations decreased to 23 due to completion of pollution abatement projects and solution of procedural violations.

(U) At the close of FY85, the 23 AMC installations had a total of four air noncomplying sources, three water noncompliers, 20 hazardous waste noncompliers and two solid waste problem areas. Thus, the net compliance posture improved during the fiscal year in the areas of air and water pollution and hazardous waste sources, but decreased in the area of solid waste noncompliers.

(U) The most pervasive environmental problem at AMC installations was groundwater contamination. At the start of FY82, AMC had only 16 installations with confirmed groundwater contamination. By the fourth quarter of FY83, this had grown to 38 and remained at 38 throughout FY84. During 4QFY85, this increased to 40 installations. Newport AAP and Sierra AD were added to the list for newly discovered on-post groundwater contamination. At the 40 installations with groundwater contamination, nine had the contamination migrating off-post and nine additional installations had the potential for off-post migration. Monitoring of groundwater continued from existing or additional wells to identify the type of contaminants and extent of migration. The CERCLA of 1980 requires investigation of and response to contamination caused by past and present disposal activities. The DOD program in this area was an outgrowth of the AMC Installation Restoration Program, and was managed by the US Army Toxic and Hazardous Materials Agency (USATHAMA) located at the Edgewood Area of Aberdeen Proving Ground. USATHAMA developed protocols for each groundwater problem, and provided technical experts to installation commanders to help with these groundwater problems.

(U) Regulatory proceedings and litigation represented a measure of legal actions against AMC installations. Regulatory procedings included violation notices, cause of adjudicatory hearings, and compliance orders. The net number of installations with such legal actions decreased from 23 to 20 between the end of FY84 and the end of FY85. During this period, the number of violation notifications decreased from 20 to 10 and compliance orders at these installations increased from seven to 10 at the end of FY85.

(U) The operating permit status (air, water, solid waste, hazardous waste, and dredge/fill) for AMC installations remained about constant during FY85. The permits increased from 86 percent on-hand at the beginning to 90 percent on-hand at the close of the fiscal year. The on-hand plus applied-for permits increased slightly from 96 percent at the start to 98 percent at the end of FY85. Command emphasis resulted in very positive results in the operating permit area.

Environmental Noise (U)

(U) Installation Compatible Use Zone (ICUZ) Program. Chapter 7 of AR 200-1, 15 June 1982, and AMC Supplement 1 to AR 200-1, 1 February 1983 give detailed guidance to implement this ICUZ program at AMC installations. It also provides the ICUZ program concept, how to prepare the ICUZ analysis study, and lists ICUZ responsibilities. The ICUZ program required development of noise zone contours at those installations generating sound from aircraft operations, weapons firings, munitions detonations, or other excessive noise activities. It further required identification and analysis of incompatible land uses and, if necessary, development of agreements with local communities.

(U) The purpose of the Army ICUZ program was to safeguard installation mission capabilities from off-post encroachment. It was patterned after similar US Navy and US Air Force programs. It differed from those in that while the USAF and Navy major noise makers were aircraft, the Army's major noise sources were impulse noise generated by large weapons, rotary-wing aircraft, small-arms firing, and continuous noise from vehicles and fixed sources such as generators.

(U) Chapter 7 of AR 200-1 and AMC guidance set forth DA policy on achieving compatible land use of public and private lands in the vicinity of Army Installations; defined desirable restrictions on land use to assure its compatibility with the noise characteristics of the installation; described the procedures by which ICUZ may be defined; and provided policy on extent of government interest in real property within these zones.

(U) At the end of FY85, 39 AMC installations were identified as needing a minimum of a complete noise contour map and 31 installations completed this step. Further, 32 installations generated no significant environmental noise. Compliance with the ICUZ requirements would be an ongoing requirement for the next several years. During FY84 and 85 AMC initiated background studies and held ICUZ training for representatives of eleven installations. This training covered ICUZ contours, site specific analysis of community noise laws, land-use requirements, and public involvement techniques. Thirteen more installations and their MSCs would be scheduled for this ICUZ training in early FY86 and in late FY86 ten more installations would receive ICUZ training if money became available to fund the program.

(U) In order to establish the total environmental noise levels from armor, artillery, rockets, demolition blasts, rotary wing aircraft, trucks and equipment at Army installations, it was necessary to know the basic environmental noise signatures/acoustic directivity patterns for equipment and weapons systems. Completed acoustic directivity patterns for weapons systems were incorporated into a noise contour computer model developed by the US Army Construction Engineering Research Lab (CERL) and ICUZ analyses were completed at installations Completed acoustic directivity patterns for weapons systems were incorporated into a noise contour computer model developed by the US Army Construction Engineering Research Lab (CERL) and ICUZ analyses were completed at installations where the weapons systems

were used. In the past, problems were encountered by FORSCOM and TRADOC due to absence of required noise signature data for new weapon systems. The noise measurements on these weapons systems had been or would be made on a reimbursable basis by CERL. Considerable public controversy and political and legal problems were also created by lack of the acoustic directivity patterns for vehicles or weapons early in the functional life cycle model for use in environmental documentation for operational testing. Communications with TRADOC and FORSCOM indicated that it was by this time critical to obtain environmental noise signature measurements for new or modified helicopters.

(U) AMC Program/Project/Product Managers were directed by AMC Chief of Staff letter, 23 October 1984, to ensure that environmental noise signature measurements/acoustic directivity patterns were conducted early in the demonstration and validation phases for all new or product-improved materiel. The basic noise information would then be used in preparation of environmental documents by the materiel developers for operational testing and by the users for modifying the installation on-going mission Environmental Impact Statements and/or conducting or updating ICUZ studies.

Installation Restoration (U)

(U) In FY85 the US Environmental Protection Agency (EPA) ranked Federal facilities to be included on the National Priorities List, and 19 Army installations, 17 of which were AMC installations, were on this list. While presence on the list did not require action to be taken, the installations listed were preparing to implement the National Contingency Plan with cleanup as the ultimate goal.

(U) Army environmental funds were used to extend or construct public water distribution systems to provide a permanent treated water supply to offpost residents whose drinking water wells were contaminated from activities on installations. A project totaling nearly $4 million was undertaken at Letterkenny Army Depot. At Phoenix Military Reservation, Maryland a contract was signed between the Army and Baltimore County to build a permanent water supply system in adjacent Baltimore County. At two other sites, Sharpe Army Depot and Twin Cities Army Ammunition Plant, bottled water continued to be provided pending the results of offpost groundwater studies.

(U) In FY85 remedial actions were initiated at Anniston AD (groundwater restoration); Cornhusker AAP (incineration); and Phoenix Military Reservation (response actions). Remedial actions were completed at Milan AAP (settling pond closure) and Woodbridge Research Facility (PCB and transformer removal).

(U) In conjunction with CERCLA actions, several pilot tests were completed in FY85 which would provide new technology useful in the removal and disposal of contaminated soils and sludges, and which would reduce the cost of aquifer restoration by providing for on-site treatment of groundwater. On- and off-post studies continued at Rocky Mountain Arsenal. Two program managers were created, one at Rocky Mountain Arsenal

and the other at Twin Cities Army Ammunition Plant. Also, based on the request of DA Environmental Office, all the Army sites in the Installation Restoration Program at 62 installations were identified.

Resource Conservation and Recovery Act (RCRA) (U)

(U) On 8 November 1984, the Hazardous and Solid Waste Amendments of 1984 (HWSA) were enacted to expand the scope of RCRA. The major provisions of HWSA became the focus of attention in AMC's RCRA program in FY85. Among the changes wrought by HWSA, which affected AMC's hazardous waste management activities in FY85, were modifications to the existing RCRA permit program; more stringent design and performance standards; and new regulatory initiatives.

(U) To assure compliance with a statutory deadline of 8 November 1985 and continuance of interim status for hazardous waste surface impoundments and landfills, efforts were directed toward preparation of Part B permit applications and certification of compliance with groundwater monitoring requirements. Installations affected were Radford AAP, Iowa AAP, Hawthorne AAP, Red River AD, Lake City AAP, Tooele AD, Corpus Christi AD, and Stratford AEP. Exposure information data were also developed for these land disposal facilities with technical support provided by the US Army Environmental Hygiene Agency.

(U) Identification of existing hazardous waste surface impoundments which needed to be upgraded to comply with the minimum requirements of double liners, leachate collection system, and groundwater monitoring system was undertaken through 2d and 3rd quarters of FY85. After 8 November 1988, these facilities could not receive, store, or treat hazardous waste unless they complied with the minimum requirements.

(U) In response to new regulatory initiatives, efforts were focused on conducting an inventory of underground storage tanks and initiation of waste minimization program. The inventory of underground storage tanks containing petroleum and chemical product was initiated on 10 July 1985 to comply with a statutory deadline of May 1986. AMC expected a major impact on existing management of underground storage tanks when the regulations were promulgated in 1987. Under initial efforts dealing with waste minimization, AMC implemented the Used Solvent Elimination (USE) program in January 1985. The objective of the USE was to eliminate disposal of waste recyclable solvents by November 1986.

(U) Out of 47 AMC installations requiring Part B permit applications for hazardous waste management facilities for which there were existing applicable final standards, 43 had their application prepared as of the end of FY85. All would be completed in FY86. As of the end of FY85, there were 36 AMC installations (including Crane AAA and Corpus Christi AD) which had submitted applications to regulatory agencies. The remaining installations were awaiting their formal notice of submission for the applications. Six installations had received their Part B permits (for existing HWM facilities - Aberdeen PG, Sharpe AD, Sacramento AD and Riverbank AAP; for new HWM facilities - Mississippi AAP and Pine Bluff

Arsenal). During FY85, RCRA Part B permit applications wee also prepared for the storage igloos for the M55 rockets located at Lexington-Blue Grass AD, Anniston AD, Tooele AD, Umatilla AD, and Pine Bluff Arsenal.

(U) Closure of certain hazardous waste management units which were no longer required were affected in Longhorn AAP (unlined evaporation pond) and Sacramento AD (tanks). Closure plans were initiated for Lake City AAP, and Tooele AD. Surface clean-up of the New Bomb area at Hawthorne AAP for unexploded ordnance, explosives, and fragments was also initiated.

(U) Twenty AMC installations were participants in the groundwater monitoring program. Groundwater quality assessment plans were prepared for Iowa AAP, Watervliet Arsenal, and Louisnana AAP. Groundwater assessments had been underway for Sunflower AAP, Radford AAP, Redstone Arsenal, Tooele AD, and Picatinny Arsenal. The final assessment study report on the Unlined Evaporation Pond at Longhorn AAP was completed and submitted to the State of Texas for approval. Environmental studies which were conducted in coordination with the US Environmental Protection Agency, on open burning/open detonation operations, continued in FY85. The US Army Environmental Hygiene Agency completed its evaluation of soil residue and groundwater quality and the US Army Toxic and Hazardous Materials Agency completed its study on parameters affecting migration of contaminants in soil. Tooele Army Depot was conducting air emissions studies to be incorporated into criteria for the preparation of an RCRA Permit Writer's Guidance Manual for open burning/open detonations facilities.[36]

Toxic Substance Control Act (TSCA) (U)

(U) HQ AMC's TSCA program in FY85 focused on compliance with regulations on polychlorinated biphenyls (PCB). Testing of electrical equipment and industrial plant equipment for PCBs continued in FY85 and was accomplished through a central laboratory under contract with the US Army Engineer Division, Huntsville, Alabama. Because of the limited funded amount of samples to be analyzed, another effort was initiated by the US Army Industrial Base Engineering Activity to perform similar testing requirements as part of condition assessment of inactive industrial plant equipment located at government sites. Also, for active industrial plant equipment located at contractor-owned facilities, direction was provided to AMCCOM to have them tested as well.

(U) Actions were also undertaken at Picatinny Arsenal to clean up and repair or dispose of all leaking PCB transformers; to initiate and maintain inspection and maintenance records for all PCB transformers; to inspect all transformers containing unknown dielectric fluid to determine their contents and condition; to establish a regular inspection program for those transformers containing an unknown fluid; and to ensure that all employees required to work with PCBs receive formal training on the precautions and hazards associated with handling them.

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[36] State of the Union, USAMC, 1985, p. 77.

(U) CECOM also provided information on the identification and environmental control of radio frequency interference filters containing PCB.

(U) On 16 August 1985, the final rule amending portions of an existing EPA rule concerning PCB transformers (electrical transformers containing 500 parts per million or greater PCBs) became effective. The rule prohibits the use of higher secondary voltage (480 volts and above) network PCB transformers in or near commercial buildings after 1 October 1990; requires the installation of enhanced electrical protection on lower secondary voltage network PCB transformers and higher secondary voltage radial PCB transformers in or near commercial buildings by 1 October 1990; prohibits further installation of PCB transformers in or near commercial buildings after 1 October 1985; requires the registration of all PCB transformers with fire response personnel and building owners by 1 December 1985; requires the marking of the exterior of all PCB transformer locations by 1 December 1985; and requires the removal of stored combustibles located near PCB transformers by 1 December 1985.

Environmental Awards (U)

(U) Five AMC installations submitted entries for the Annual AMC/DA/DOD Environmental Quality Award during FY85: Aberdeen PG, Iowa AAP, Pine Bluff Arsenal, Red River AD, and Tooele AD. Pine Bluff Arsenal won the AMC Award, and Aberdeen PG and Iowa AAP were runners-up. These three installations were nominated for the DA Award but did not place in that competition.

(U) Mr. Donald L. Compbell, Program Manager's Office, Rocky Mountain Arsenal Contamination Cleanup, was nominated to HQDA for the Federal Environmental Engineer of the Year Award. He did not place in the competition.

Environmental Restoration program (ERP) Funds (U)

(U) AMC's share of ERP funds was increased to $40.810 million during FY85. Of this amount, $40.768 million was obligated, a rate of 99.90 percent.

Defense Environmental Status Report (DESR) Report (RCS DD-M(A)-1485) (U)

(U) This report serves as a basis for DA's annual review to DOD. It also serves as an indicator of how well AMC proceeds toward achievement of DOD directed environmental objectives. The report, submitted as required in November each year, continues to indicate progress toward achievement of compliance objectives. However, new requirements under RCRA and CERCLA continue to keep AMC compliance rate at less than 100 percent.

(U) For FY85, new sections were added by DOD to the DESR on leaking underground storage tanks, on management of specialized waste and on environmental auditing. At HQ AMC questions were added to give the status of the Installation Compatible Use Zone (ICUZ) Program.

National Environmental Policy Act (NEPA) (U)

(U) Policies and procedures for NEPA were generally sound and continued to be implemented throughout AMC. Unresolved issues at lower echelons were the exception, but were surfaced to AMC as needed. During FY85, HQ AMC had considerable involvement with NEPA documentation relating to Disposal of Chemical Munitions (Unitary Type), and development and production of Binary Chemical munitions. Of special interest was an Army proposal to build a biological test laboratory at Dugway Proving Ground. This proposal resulted in a highly publicized lawsuit which charged inadequate NEPA documentation. A court decision of 31 May 1985, blocked construction of the $1.4 million project pending completion of a better environmental assessment. An Environmental Impact Statement was not required. Nine support facility projects ($7 million) and their NEPA documents were accepted and construction for those was allowed. The only other significant development had to do with potentially inadequate life cycle documents. Requests for testing items and weapon systems being developed were often accompanied by inadequate NEPA documents or none at all. Command emphasis to prepare life cycle documents was again needed. The Commander, AMC, supported the need to direct full support by Commanders and all Program/Project/Product Managers in Commander's Guidance Statement #91.

Air Quality (U)

(U) The Air Quality Program throughout AMC continued to work and was largely controlled through the permit process. Three noteworthy items highlighted air quality control throughout AMC during FY85.

(U) Open Burning/Open Detonation. The OB/OD of munitions and related materials was an important and necessary element of AMC's mission. OB/OD supplements the disposal process of the Explosive Waste Incinerators and Contaminated Waste Processors. The discharges and residues associated with OB/OD were the subject of considerable study over the preceding year mainly due to the requirements of RCRA and the potential for groundwater contamination.

(U) Mississippi Army Ammunition Plant. Significant problems with air quality continued to plague the Army's new Mississippi Army Ammunition Plant. Efforts to operate the mechanical steam plant and the forge shop within allowable emission discharges resulted in two enforcement actions and a USAAA Audit (May-Jul 85). Violations resulted in issuance of two compliance orders by the Mississippi Commission on Natural Resources, the first, 22 May 1985, was issued to CG, AMC to correct air emissions from the forge shop by 30 June 1986. In June 1985 the order was sent to CG AMCCOM for action. AMCCOM advised that fix was due for completion and verification by 1 February 1986. The second order, 23 May 1985, was issued to the Chief of Engineers to correct air emissions from the mechanical plant (coal-fired boilers) by 1 January 1986. Fix was expected to be in place by 1 January 1986.

(U) Vehicle Emission Control. Inability of White Engines, Incorporated, to meet 1985 Federal emission standards for the engine used in the 2 1/2-ton truck resulted in White's request to EPA for exemption of 4,500 engines. The request was supported by a DOD letter to EPA 16 January 1985 while asking the Army to consider retrofitting the engines when certified fixes became available. The Army's study conducted by TACOM resulted in a positive response to EPA. The TACOM letter committed to performing the retrofit action at the Depot maintenance level. Obtaining exemptions for uncertifiable engines/vehicles from EPA had to be based on good faith efforts to meet standards and fully justified requests. Reluctance by EPA to grant such exemptions continued to be growing.

Water Quality (U)

(U) In FY85 the water pollution control community in general continued to wait upon the finalization of overdue amendments to the Clean Water Act. In the interim, AMC participated in reviews of the status of cleanup efforts in support of the DOD-EPA Joint Initiative on the Chesapeake Bay. There were also continued efforts to reach agreement on certain difficult issues related to National Pollutant Elimination Discharge System Permits, particularly at Lake City Army Ammunition Plant and at Anniston Army Depot. A change in the Supplement to AR 200-1 was also published which required notification of AMC and MSCs in the event of certain exceedences in permit limitations.

Environmental Publications (U)

(U) The environmental Newsletter, an unofficial publication authorized under provisions of AR 360-81 was initiated in FY79. It was continuously published each year as items of interest warranted. During FY85, the Newsletter was issued for August-December 1984, January-February 1985, and March-April 1985. The March-April issue included a cover letter by CG, AMC.

Headquarters Civilian Personnel Office (U)

(U) In FY85 the Headquarters Civilian Personnel Office (HQ CPO) underwent major changes, both organizational and personnel. Emphasis was placed on providing quality service to AMC employees and the recruitment of new talent to accomplish command initiatives.

(U) Reorganization. The HQ CPO was reorganized, and thereafter reported to the Deputy Chief of Staff for Personnel. With that change came several employee changes which included a new Civilian Personnel Officer and four new Branch Chiefs. The primary purpose of these changes was to bring new ideas and creativity to the headquarters.

(U) Two major initiatives were identified by the new personnel officer which were designed to improve the image of the HQ CPO and encourage supervisors to support sound position and performance management. The Personnel Officer was successful in accomplishing a revitalization of the personnel office.

(U) Policy and Program Development. The position classification management program was strengthened through the new Branch Chief's initiatives, and planned organizational reviews. The US Army Equipment Authorization Review Activity was reviewed and its personnel were very receptive to position management advice and assistance. The Position Management and Classification Branch implemented a job accuracy cyclic review survey schedule program for the first time and results reflected 100 percent accuracy.

(U) The Training and Development Branch conducted 25 UNIX for Functional Users classes which resulted in a $148,000 cost avoidance. This reflected a great organizational cost benefit from the intense training effort.

(U) The Management Employee Relations Branch was instrumental in the development of a tracking system for delinquent performance appraisals. The system helped to make supervisors and managers aware of their individual responsibility of ensuring that employees are kept aware of their level of demonstrated job performance.

(U) The Suggestion Program achieved significant results during FY85 and surpassed all of the results of previous fiscal years. From an extreme low of 18 suggestions in FY84, the program received 286 submissions during FY85. The FY85 goal of $60,127 total savings was far exceeded with a total tangible benefit or savings of $423,276. The Incentive Awards Program staff, through creative campaigns, helped to make this program successful. In addition the Incentive Awards Program Administrator worked very closely with CPD counterparts in support of the Commander's Awards Day which was a success.

(U) The HQ CPO revitalized civilian personnel management through the implementation of new systems and programs. Initial emphasis was placed on special employment program administration (handicapped individuals, disabled veterans, stay-in-school program, veteran's readjustment program). A Special Programs Coordinator was appointed for the first time in HQ CPO. Six stay-in-school appointments made during FY85 exceeded the two appointments made in FY84. Two professors from historically black colleges and universities (HBCU) were selected for summer employment positions, one as a Logistics Management Specialist, and the other a Personnel Management Specialist. These were the first appointments made under the HBCU special employment program.

Adjutant General Division (U)

(U) FY85 was a year of change and restructuring for the Command Adjutant General Division. In October 1984 the Schools Division was combined with the Army Continuing Education System Office to form the Education Section under supervision of the newly formed Community Life Services Branch. However, the greatest change occurred in July 1985 when the division lost the Library Program Office and the Administrative Systems Branch. Only the Top Secret Repository and the Travel Section remained with the AG Division. The division, in effect, lost one entire

branch with 37 authorized spaces. Operating with the one remaining branch, the division was expected to make further internal changes after the final decision was made concerning the HQ AMC restructuring.

(U) The AMC Educational Network began televised logistics education in January, and a total of 1,642 students graduated from courses taught through the network. These students would not have received the courses had only resident instruction been used.

(U) A HQ AMC Child Care program was implemented and a Family Program Specialist was hired to coordinate AMC's family programs.

Army Continuing Education System (ACES) (U)

(U) Reorganization. As part of the ODCSPER reorganization, October 1984 the Army Continuing Education System (ACES) Office became the ACES Section when moved from the Community and Personnel Services Branch and combined with the Schools Division to comprise the new Education Branch under the newly organized Community Life Services Division, Office of the Command Adjutant General. A subsequent reorganization changed the ACES Section to the ACES subsection under the Education Section. Also, the mission and functions of the ACES subsection were expanded to include staff management of Short Course Training for military personnel and Foreign Military Training. A Second Education Services Specialist position was authorized and filled to assist with staff management of ACES and Family Member education programs and services.

(U) Redirection of ACES. A historic decision was made pertaining to the proponency of ACES, with AMC's position that DCSPER retain proponency being sustained by HQDA. An MOU between the HQDA, DCSPER and DCSOPS transferred the foreign language programs/Army Apprenticeship Program and the Advanced Skills Education Program to DCSOPS proponency for policy and resourcing; however, these programs would continue to be offered through Army Education Centers (ACES). HQDA, DCSPER was given single proponency for all Army Learning Centers (ALCs). AMC identified the DCSPER as the single proponent for ALCs (ACES)/unit/CPOs within the command and ALC resourcing requirements were identified in preparation of HQDA's plans to transfer all resourcing into the P879732 (ACES) account with the exception of AMC schools and TRADOC service schools.

(U) ACES Services. Ten AMC Army Education Centers and seven subcenters provided ACES support to 64 percent (14,480 of 22,763) of the soldiers and other service members (permanent party and trainees) within their Service areas. Twenty-seven percent (6,167 of 22,763) were enrolled in ACES sponsored courses, some earning the following credentials: 203 state high school equivalency certificates, 21 vocational certificates, 111 associate degrees, 88 baccalaureate degrees and 93 masters degrees. There were 14,639 course enrollments and 11,697 course completions (80 percent). ACES counselors provided 36,626 individuals and 534 group counseling sessions while 17,150 tests were administered by ACES testing sections and 62,588 learning support service visits were supported by ACES

learning centers/MOS libraries/language labs. The overall average cost per enrollment was $140 while the cost per counseling session was $9.83 and the cost per service visit/test was approximately $10.50.

(U) ACES Program Development. The US Armed Forces Command developed McFann Grey curriculum was adopted as AMC's standardized basic skills Education Program (BSEP) curriculum with materials being drop shipped to each AMC education center. As one of two Army test sites for the Army Extended Degree Program, Fort Monmouth completed the review of this effort to identify ways of enhancing educational support to military family members. Basic planning was initiated for implementation of the new Career Skills Education Program I/II. Within AMC, ACES guided the phase out of the Veterans Education Assistance Program (Effective 1 July 1985) and the implementation of the new (1985) GI Bill. AMC education centers continued to support mid-term reenlistment by providing BSEP instruction to more than 225 mid-term soldiers. Approximately two-thirds of those who post tested (146) achieved qualifying scores for reenlistment following BSEP. The overall average score increase on the General Technical score was 17.9 points. Within AMC, a total of 1153 soldiers were enrolled in The Army Apprenticeship Program (TAAP). AMC lost 11 percent fewer TAAP participants because of ETS, dropped 6 percent fewer participants and achieved a 2 percent higher completion rate than the Army average.

(U) Army Partnership in Education (Adopt-A-School) Program Development. During FY84 AMC led the Army in the continued development of Adopt-A-School partnerships with 36 installations supporting 62 separate schools/school districts. A HQ AMC Adopt-A-School Volunteer Coordinator, Mrs. Isabel Crocker, AMCSM-WAA, was appointed to coordinate AMC's adoption of the George Washington Junior High School in Alexandria, Virginia. Although a final agreement was not consummated, limited support for the school was provided in FY85 through coordination of the HQ AMC Public Affairs Community Relations Office.

AMC Education Network (U)

(U) The US Army Logistics Management Center (ALMC) was tasked in FY82 to explore the concept of exporting logistics education across the logistics community via televised broadcast. This system or network would allow AMC to increase its productivity and better meet its educational challenge.

(U) The network began operation on 7 January 1985 when it broadcast the four week Management of Defense Acquisition Contracts Course (Basic). The original network consisted of the transmitting station at ALMC, Fort Lee, Virginia, and the following ten receive stations: Communications-Electronic Command (CECOM), Fort Monmouth, New Jersey; Armament, Munition and Chemical Command (AMCCOM), Dover, New Jersey; Armament Munition and Chemical Command (AMCCOM), Rock Island, Illinois; Test and Evaluation Command (TECOM), Aberdeen, Maryland; Tank-Automotive Command (TACOM), Warren, Michigan; Aviation Support Command/Troop Support Command (AVSCOM/TROSCOM), St. Louis, Missouri; Missile Command (MICOM), Huntsville, Alabama; Depot Systems Command/Letterkenny Army Depot

(DESCOM/LEAD), Chambersburg, Pennsylvania; and the Belvoir Research and Development Center, Fort Belvoir, Virginia; and the Defense Construction Supply Center, Columbus, Ohio.

(U) Since the opening of the network, the following additional sites had become a part of this educational system: US Army Defense Ammunition Center and School, Savanna, Illinois; Anniston Army Depot, Anniston, Alabama; Tobyhanna Army Depot, Tobyhanna, Pennsylvania; Sacramento Army Depot, Sacramento, California; Corpus Christi, Texas; New Cumberland Army Depot, New Cumberland, Pennsylvania; AMC Intern Training Center, Texarcana, Texas; Army Materiel and Technology Laboratory, Watertown, Massachusetts; Norfolk Naval Supply Center, Norfolk, Virginia; San Diego Naval Supply Center, San Diego, California; and the Defense Electronic Supply Center, Dayton, Ohio.

(U) Courses taught and the number of offerings are listed below:

Course	Offerings
Management of Defense Acquisition Contracts (Basic)	3
Management of Defense Acquisition Contracts (Advanced)	2
Army Secondary Item Management	1
Logistics Support Analysis	2
Commodity Command Standard Systems (Functional)	3
Army Provisioning Management	2

(U) A total of 1,642 students graduated from courses taught through the AMC Education Network. Grades for students in the Remote Multi-Media Mode (RM3) closely parallel those for students in the same courses taught in residence and onsite during FY85. Instruction and exams were identical for all modes.

(U) Statistics indicated that student achievement in RM3 classes was essentially equal to that of resident classes and exceeded student achievement in onsite classes for the same courses. In addition, RM3 allowed ALMC to teach 1,642 more students in FY85 than had only resident and onsite methods been used. The average cost for a resident student for a four week course is approximately $2,000 while the average cost for an RM3 student for the same course was approximately $430. This represents a cost avoidance of approximately $2.6 million for the 1,642 students.

Travel Section (U)

(U) The Travel Section was able to support fully the travel requirements of AMC personnel. During FY85, the section processed 9,943 CONUS TDY requests for travel of HQ AMC personnel. More than 4,755 requests for travel of from HQ AMC, major subordinate commands, separate installations and activities were processed. Permanent change of station (PCS) orders were issued to 148 civilian employees. Requirements for official local transportation were met by authorizing the use of privately owned vehicles when it was deemed more advantageous to the Government. Bus tickets and subway passes were furnished to personnel when commercial

transportation was available for the conduct of official business within the local area.

Top Secret Repository (U)

(U) The Top Secret Repository continued to improve operations with the addition of a permanent clerk typist. In September 1985, the repository received an outstanding rating for the second consecutive year from the HQ Service Support Activity inspection.

Alcohol and Drug Abuse (U)

(U) The AMC Alcohol and Drug Abuse Prevention and Control Program (ADAPCP) Program set the pace for the rest of the Army in the prevention of alcohol abuse in the civilian work force. During FY85 the AMC rate of admission to the program was 6.6 per 1,000. Alcohol abuse accounted for 88 percent of the admissions. Cannabis and tranquilizers were the most common other drug preferences. Factors contributing to the continued success of the ADAPCP included: emphasis and direction by the Commanding General; stability of ADAPCP staff; increased supervisory awareness and confidence in the ADAPCP staff by managers and supervisors; and use of the ADAPCP by management as a tool for dealing with performance problems. The positive results brought about better program acceptance.

(U) Prevention and Education. Prevention and education were strongly emphasized with supervisory personnel. The AMC goal to train 80 percent of the supervisors was met. Training does increase supervisory acceptance of the program as a management tool.

(U) Identification and Rehabilitation. The number of civilian personnel admitted during FY85 was 743. The admissions for AMC decreased from 7 to 6.6 per 1,000, a 3 percent decrease over FY84 but 1.5 percent increase over FY83. Another 3,091 employees were screened and assisted by the ADAPCP staff or referred to other resources. Military admissions (including tenants) was up from 46.6 per 1,000 in FY84 to 47 percent per 1,000 in FY85. Cannabis accounted for 39.3 percent in FY84. This increase could be attributed to the Commanders' use of detection tools available for identifying drug abusers. Program flexibility (Track I, II and III) permitted more clients to complete the program prior to PCS, ETS or retirement. This flexibility allowed for an FY85 cumulative completion rate of 70 percent.

(U) Management. Staff Management Assistance Reviews were conducted at 10 installations. The purpose of these reviews was to provide the commander on-site recommendations, technical assistance and evaluation of the program. These reviews assured that policy and regulations were observed and also gave the program increased visibility and emphasis.

(U) Headquarters Counseling Service. As a result of intensive efforts through individual consultation with supervisors and through an educational program focused on individual office needs, the number of management referrals increased in FY85. The need for privacy for the HQ

Counseling Services Office led to negotiations with the Occupational Health nurse through Walter Reed Army Hospital Center to provide space in the Health Clinic.

Child Development Services (U)

(U) Fifteen AMC installations operated Child Development Services (CDS) programs with full day, hourly, part day school-age and part day preschool developmental programs for young children six weeks through twelve years of age.

(U) Family Child Care. FCC, a quarters-based child care system, was initiated at Aberdeen, Rock Island, Redstone, White Sands, St. Louis Army Support Center, Yuma, and Fort Monmouth. Other installations began planning for Family Child Care (FCC) to implement the FY86 HQDA FCC PDIP and to provide greater child care services to AMC families.

(U) Efforts which began during FY83-84 to upgrade CDS facilities continued to ensure all health and safety standards were met. Attempts to eliminate the need for HQDA waivers and to put AMC on a course toward suitable child care facilities resulted in UMMCA projects for New Cumberland, Sierra and Seneca. Projects in the MCA program included Aberdeen (FY85), Redstone (FY86), Rock Island (FY87), Selfridge (FY87), Yuma (FY87), Dugway (FY87), Fort Monmouth (FY88) and St. Louis (FY88).

(U) Headquarters Child Care Program. In May 1985, AMC hired a full-time Child Development Services Program Specialist to develop a Headquarters Child Care Program. Information and referral to area child care facilities and counseling services were provided, and it was anticipated that services during FY86 would be expanded. Action was initiated to establish, as an exception to existing DA/DOD policy, an employee child care center patterned after centers operated by the Department of Labor and US Senate. A work/family seminar series was initiated in September, and additional weekly seminars were planned for FY86.

Army Community Service (ACS) Program (U)

(U) AMC made great strides in program development expansion in the ACS arena during FY84. Command support and enthusiasm for ACS Programs had steadily increased. During FY85, nineteen ACS centers were operations. Thirteen centers had all six essential core programs IAW AR 608-1, to include a full-time ACS officer and full-time family Advocacy Program Coordinator.

(U) ACS program evaluations were conducted by the HQ AMC ACS staff at twelve installations in FY85. All evaluated installations were found to be providing the community services at an outstanding level. The addition of fenced (PDIP) family programs funds to the AMC ACS budget was instrumental in the development and implementation of several effective family programs with emphasis on outreach, community awareness, prevention, and treatment for dysfunctional families.

(U) A total of 160,100 customers throughout AMC in 1985 received AMC ACS services such as information, referral and follow-up, relocation services, exceptional family member program services, spouse and child abuse services, foster care services, and consumer affairs and financial counseling services. Consequently, the AMC ACS program made a tremendous effort to meet the needs of the Army family in the AMC command.

Morale, Welfare and Recreation (MWR) Section (U)

(U) During FY85, the AMC MWR effort was significantly influenced by two major issues. The first involved the House Armed Services Committee (HASC) action to reduce appropriated funds by $2.0 million to clubs located on installations with small military populations. The Morale, Welfare and Recreation Review Committee (MWRRC) agreed to supplement affected AMC clubs with offset nonappropriated funds to ensure operations would not be adversely interrupted. AMC also provided the HASC with a detailed report which explained the myriad of command actions to reduce appropriated fund support, improve programs and operational efficiencies since 1982.

(U) HQ AMC and installation commanders monitored club operations to ensure appropriate management.

(U) Another long-term MWR issue was the establishment of brand name fast food (Burger King) facilities at AMC installations. Aberdeen Proving Ground, Redstone Arsenal and Seneca Army Depot were scheduled to receive Burger King facilities in FY86. The brand name fast food program was centrally administered by the Army and Air Force Exchange Service (AAFES) and net income was equally divided between AAFES and the installation. The installation share of the earnings would be used to support local military and civilian morale, welfare and recreation programs.

Deputy Chief of Staff for Personnel (U)

Provost Marshal Office (U)

(U) During FY85 the receipt of increased resources was the most prominent event. Approximately $4.3 million reprogrammed money, along with an additional $4.9 million of CG AMC money was diverted for security upgrades. All money was distributed to the MSCs.

(U) Ninety-five civilian positions were distributed among AMC activities in support of CG, AMC's increased concern for security and counterterrorism. The Security Support Activity (SSA) decreased its strength by nine, with four coming to the provost marshal and the remainder going to the newly established DCS for Intelligence. Action was initiated to eliminate SSA as a Separate Reporting Activity (SRA) and to place the remaining positions on the HQ AMC TDA under the provost marshal.

(U) There were two significant changes that occurred in FY85. COL David Garner replaced COL Carl Humphreys as the Provost Marshal on 12 November 1984 and MAJ Jimmie Burns replaced LTC Ron Perry on 12 August 1985. Also, two GS-12 ACTOs were audited and upgraded to grade GS-13. An overhire (terrorism) position was similarly audited and upgraded.[37]

Civilian Personnel Division (U)

SES Prioritization and Performance (U)

(U) In spite of its commitment to prudent performance management, AMC FY83 average for exceptional SES ratings was 61 percent, 26 percent above the government-wide average. Through utilization of the SES Performance Review Board (PRB) to control rating inflation, the 1984 average exceptional ratings were reduced to 53 percent, which was below the HQ DA average of 58 percent. The FY85 PRB reviewed 131 appraisals and recommended 23 percent exceptional, 53 percent highly successful and .07 percent minimally satisfactory ratings for approval.

(U) During FY85 the SES program was required to reduce the number of SES requirements and fill those with higher priority. To accomplish this task, the AMC prioritization list was scrubbed as part of the February 1985 biennial review. The CG supported the reduction effort in the headquarters by stating his position of austerity at the August Commanders' Conference. AMC SES requirements were reduced from 174 to 163.[38]

Interns (U)

(U) In FY84 DA allocated AMC an increase of 268 (16 percent) intern spaces. This increase was complicated by DA's earlier decision to reduce the period of centralized funding from three years to two years, causing early placements on local roles and increasing the already large number of intern vacancies. By holding early meetings with DA, developing a convincing argument for increased funding, and preparing a viable recruitment plan, 1,232 interns were recruited during FY84. Due to the success with intern recruitment in FY84 and continued interface with DA during FY85, resource allocations for the intern program were improved during FY85.

(U) The initial FY85 resource allocation for AMC was 1,917 intern spaces and an Annual Funding Program (AFP) of $43,732,000.[39] Subsequent adjustments resulted in an end-year authorization of 1,912 spaces and $45,482,000 AFP. AMC completed the FY with a 100 percent obligation of funds.

(U) Despite the pressure to obtain authority to automatically convert Schedule B intern appointees to competitive service, OPM continued to control all conversions. AMC did succeed, however, in obtaining

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37 DCS for Personnel AHR submission, FY85.

38 HQ AMC SES positions, FY85.

39 Ltr, HQDA, PECC-CMS, 6 Nov 84, subj: CTED Student Detachment FY85 Resources Allocation.

recognition from OPM for timely efficient conversions and received some assurance that all Schedule B appointees would be within reach for competitive appointments.

(U) Under Schedule B appointing authority, 1,353 highly qualified individuals (76 percent of the DA Schedule B population) were accepted into AMC Career Intern Programs by 30 September 1985. Nine-hundred-fifty-seven interns were assigned to the DA Civilian Training, Education and Development Detachment (CTED) Student and 396 were local interns. Fifty-nine AMC interns were converted to career conditional status. Contrary to predictions,[40] CPO reported that OPM Area and Regional Offices were cooperative and responsive to AMC conversion requests. Although procedures to convert these interns to competitive status remained cumbersome, carefully crafted crediting plans and narrow selective placement factors had resulted in AMC interns being within reach on Certificates of Eligibles.

Automation (U)

(U) During FY85 HQ AMC was intensely involved in the analysis and evaluation of civilian personnel management information systems for AMC-wide adaptation. GEN Thompson negotiated with HQDA to install a modified version of the USAF Personnel Data System-Civilian as an interim standard personnel system for AMC until a new DA system was ready. The decision rested with the Under Secretary of the Army.

(U) In 1980 the Army Civilian Personnel System (ACPERS) Development Project Office was established to assess the civilian personnel information needs of the Army community and to make recommendations on a new system that would provide the widest support for both mobilization and peacetime requirements. Several system development options were investigated and a recommendation was made by the HQDA DCSPER to adopt the Air Force Personnel System as the basis for ACPERS. The HQDA Assistant Chief of Staff for Information Management (ACSIM) nonconcurred with this recommendation, citing incompatibilities with the Army architecture. A number of meetings between the staffs of the DA DCAPER and ACSIM were held on this subject, but no agreement was reached. Because of the lack of positive action at the departmental level, the Commanding General, AMC, in a letter to the Director of the Army Staff[41] addressed the inadequacy of the systems to efficiently manage the work force. He emphasized that a great deal of time had already been lost pending the development of an Army-wide system and preferred to use an Army-wide standard personnel management information system. If a DA system required two to three years to develop and implement, AMC resources would be used to immediately entertain alternative solutions. On 11 October 1984, General Thompson tasked both DCSPER and DCSIM to jointly develop a standardized personnel management information system for AMC within the following two years.

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40 Point Paper, HQ AMC, AMCPE-CE-S, 19 Feb 85, subj: Schedule B Conversion.

41 Ltr, CG AMC to Dir of the Army Staff, 4 Sep 84.

The idea of using existing systems such as the Air Force or Military District of Washington system existing was fully explored.

(U) The Army Chief of Staff for Information Management did not concur with the AMC Mission Element Need Statement (MENS) which stated that the MENS duplicated an existing ACPERS MENS approved in September 1980 which would replace all automated civilian personnel systems in the Army. The resources that AMC would have used to support Army Materiel Command Civilian Personnel System (AMCCPS) would be used to augment the Information Systems Command effort to develop ACPERS.[42] The Acting Assistant Secretary of the Army indicated a desire to accommodate AMC's request for an interim system which was not cost prohibitive. As a result, an economic analysis, implementation time line and cost figures for AMC's interim system were provided on 11 June and 23 August 1985.

(U) During October-November 1985, several meetings were held by the Under Secretary of the Army with the ACSIM, ISEC, DCSPER and CIVPERCENS Staffs. AMC DCSPER was included in an effort to resolve issues raised by AMC to ensure the final solution was economically sound. However, the AMC position, immediate need to develop and implement an interim personnel management information system, remained firm.

Program Planning, Development and Evaluation (U)

(U) The Civilian Personnel Division took definitive steps to increase the emphasis placed on evaluating civilian personnel management functions at all levels. An AMC-wide personnel program planning document[43] was developed during FY85 as a result of a first-time ever planning meeting with the major subordinate command (MSC) civilian personnel managers. The plan not only supported DA priority objectives and outlined broad mission related goals and objectives, but advised subordinate CPOs to develop local plans to support HQDA, AMC and MSC objectives and requirements. The division was innovative in assuring that program planning and evaluation would be a continuing process at every level by encouraging each subordinate staff and operating CPO to designate a point of contact for all matters concerning civilian personnel management, program planning, and evaluation. This innovation was carried even further through the division's firm support of the Civilian Personnel Executive Round Table which took place in June 1985 for all AMC personnelists who were program planning and evaluation contacts. During this workshop, evaluators shared their experiences in local planning and evaluation and learned new techniques and skills to make them more effective in the evaluative process.

(U) During FY85, AMC Civilian Personnel conducted three onsite reviews of MSC HQ: TECOM, DESCOM, and AMCCOM. All were found to be providing good leadership support to their subordinate activities. The

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42 Ltr, HQDA, DAPE-PSS, 19 Mar 85, subj: Mission Element Need Statement for the Development of the AMCCPS.

43 Ltr, HQ AMC, AMCPE-CA, 19 Oct 84, subj: AMC Civilian Personnel Management Program Objectives and Goals, FY85.

FY86-87 Schedule of Personnel Management Surveys by DA, MSCs and the division was developed and appropriate coordination was made to avoid unnecessary duplication of effort.[44]

(U) The Manpower Staffing Standards System was established by DA to satisfy demands for a requirements determination system which used workload measurements as the basis for identifying and justifying manpower requirements. Manpower requirements based on manpower staffing standards were viewed by congressional armed services and appropriations committees as having greater credibility than those not supported by manpower staffing standards. As a result of the credence given by Congress and hence DA to the Manpower Staffing Standards System and the cooperation provided by AMC civilian personnel managers to provide accurate work count information, 32 additional CPO spaces were identified in the FY87 Program Budget Guidance (PBG). Distribution of these spaces was made to the MSCs with recommendations for apportionment to subordinate installations.[45]

(U) In FY83, this headquarters announced Operation PRO ACT, a study to examine approaches to achieving efficiencies and economies through such means as sharing personnel/manpower sources and combining functions and subfunctions. In FY84-85, the civilian personnel portion of the PRO ACT study team considered recommendations for consolidations of civilian personnel offices and cooperative efforts in recruitment and training among selected CPOs in AMC. As a result, three major initiatives were recommended or implemented.

(U) HQ AMC directed consolidation of Sacramento Army Depot (SAAD) and Sharp Army Depot (SHAD) CPOs by 1 October 1985 and directed re-examination of the feasibility of including SIAD CPO in that consolidation not later than 1 October 1986. As an alternative, DESCOM proposed a one phase consolidation of SIAD, SAAD and SHAD with an effective date of 1 January 1986 rather than a two phase consolidation.

(U) HQ AMC requested that the Department of Health and Human Services (HHS) staff explore the possibility of providing civilian personnel administration services to the Army Research Office (ARO). Subsequently, the decision was made to pursue alternative servicing possibilities rather than with HHS. Since ARO had become a LABCOM subordinate organization, LABCOM proposed that more efficient servicing could be provided within LABCOM channels.

(U) HQ AMC directed implementation of cooperative efforts in recruitment and training for six CPO groups in AMC.[46]

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44 Ltr, HQ AMC, AMCPE-CA, 19 Aug 85, subj: AMC Civilian Personnel Management Program Reviews and Surveys, FY86-87.

45 DF, AMCPE-CA to AMCRM-MFR-S, 13 Nov 85, subj: Distribution of 32 Spaces: DA CPO Proposed Increase in the FY87 PBG.

46 Ltr, CG AMC to Cdr AMCCOM, 23 Apr 85, subj: Operations PRO ACT (Civ. Personnel Portion) - Cooperative Efforts in Recruitment and Training.

Position Management (U)

(U) A congressionally imposed DOD ceiling on the number of positions at the GS-13 level or higher was in effect until 1982. In 1984 HQDA eliminated its high grade ceiling. However, to preclude the possibility of potential progressive high grade increases, AMC issued guidance to the MSCs that positions in grades GS/GM 11/15 would be intensely managed and that subordinate commands would be required to provide an audit trail and justification for essential increases.[47]

(U) Management efforts included audits of GS/GM 11-15 positions at 24 locations during January-August 1984. Four-hundred-twenty-three employees/positions were randomly selected for audit of grade and job description accuracy. Four-hundred-three positions were found to be graded correctly, 20 incorrectly. The audits determined that the AMC grade accuracy rate was 95.3 percent. The DA level of minimum acceptability which was 95 percent indicated that AMC activities generally grade GS/GM 11-15 jobs properly.[48]

(U) Though the grade average of GS/GM 11-15 positions did not increase, the number of positions increased in FY85 by 4.3 percent over FY84. By comparison, the GS 1-10 growth increased only 1.1 percent. General Thompson was not pleased with continual growth of GS/GM 11-15 and was very concerned that ceilings may again be imposed or a specific reduction target might be given. APORS, CAs, ERs, SMAs and position management recommendations did not seem to be doing the job.

Equal Opportunity and Affirmative Action (U)

(U) The division's support of affirmative action and equal opportunity had a significant influence on program areas throughout AMC. Of the 828 interns recruited in FY85, 337 (41 percent) were women and 246 (30 percent) minorities which exceeds all equal employment opportunity affirmative action goals.

(U) To improve minority recruitment of Hispanics and reduce travel costs, the AMC Field Placement Office (FPO), Midwest Region, Davenport, Iowa was closed effective 16 August 1985 and was relocated in Sacramento, California in the Western Region FPO. While the recruitment of a new staff was in progress, the workload was shifted temporarily to the Southern FPO at Marietta, Georgia.

(U) As a result of improved outreach in SES recruitment, virtually every SES referral list contained at least one well qualified minority or female candidate.

(U) The CPA/EEO Exchange Program was developed at HQ AMC to expand and enrich functional and managerial skills of CPA and EEO careerists through cross functional assignments. At the EEO/CPO conference in

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47 CGS No. 65, HQ AMC, AMCPE, 4 Feb 85, subj: Position Management.

48 Information Paper, AMCPE-CP, 13 Nov 85, subj: Improved Position Management of GS/GM 11-15 Positions.

January/February 1985, cross development of EEO/CPO specialists using tailored training plans emerged as an action item. On 14 May, the Chief of Staff issued a letter and milestones for implementation to the MSCs.[49] In July, when the ADCSPER requested MSCs to report on program implementation, seven careerists were participating in cross training, interchange of responsibilities or assigned to formal details to obtain cross functional experience.

Performance Management (U)

(U) AMC encouraged its supervisors to abandon the "business as usual" attitude and strongly urged them to do the best job possible in appraising their subordinates. Emphasis on performance evaluation requiring personal involvement of the Commander resulted in the issuance of a command-wide CG Guidance Statement[50] to establish a system of accurate and timely performance appraisals.[51]

(U) In addition the division took on the ambitious project to assure that each AMC activity had two trainers within its organization who could train local supervisors on how to improve performance standards. The division contracted with the OPM, Performance Management Training Center, to develop and present train-the-trainer workshops on developing individual performance plans. The six (4 1/2 day) workshops trained approximately 40 two-person teams from field activities who were charged with the responsibility to train supervisors locally on the improved methods for developing performance standards.

(U) In implementing the new merit pay program, Performance Management and Recognition System (PMRS), the division was sensitive to AMC's obligations to its supervisors and managers. Merit increases and comparability increases were effected on target. Due to divisions' concern about the awards component of the program and to its desire to assure that AMC was on the right track in implementing the new system, a PMRS Advisory Group was established to represent each MSC in policy making decisions.[52]

(U) The division's influential leadership in monitoring the development of AMC policy concerning performance awards to GM employees led DA to adopt the AMC position that all MACOMs who maintained award levels below 1.5 percent of the GM payroll would be allowed to use the maximum amount of 1.5 percent.[53]

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49 Ltr, AMC CofS, 14 May 85, subj: USAMC EEO/EO-Civilian Personnel Office Conference, Atlanta, GA, 28 Jan-1 Feb 85 - Human Resources--The Key to Leadership.

50 CGS No. 67, HQ AMC, AMCPE-CE-L, 20Feb 85, subj: Timeliness of Performance Appraisals.

51 Daily Information Summarym HQ AMC, AMCPE-CE-L, 18 Jun 85, subj: GPAS Appraisals.

52 Msg, HQ AMC, AMCPE-CE-L, 24 Jan 85, subj: PMRS.

53 Report, DCS for Personnel, 3 Apr 85, subj: Payout of Performance Awards.

(U) In FY85 at most AMC commands, the GM rating profiles improved. Significant improvement was made by DESCOM. Their ratings of exceptional were down from 20 percent in FY84 to 12 percent in FY85. HQ AMC also made significant improvement from 27 percent exceptional in FY84 to 11 percent in FY85. The following profiles show the performance of HQ AMC and the top three MSCs as compared with the overall AMC profile.[54]

	Exceptional	Highly	Fully
TROSCOM	9%	35%	55%
HQ AMC	11%	35%	54%
AVSCOM	12%	32%	56%
DESCOM	12%	44%	45%
Overall	14%	31%	54%

Career Management and Training (U)

(U) During FY85, the Civilian Personnel Division was responsible for numerous innovative developments in career management and training which broadened managerial experience and provided systematic executive development. The SES Development and Utilization Subcommittee was established to address the issue of SES executive development. The subcommittee was successful in obtaining OSD training quotas which were expected to provide a supplementary source to support short term projects and relieve members of collateral responsibilities. The Logistics and Acquisition Management Program (LOGAMP) was expanded to six disciplines in response to the CG's initiatives to enhance functional/managerial development of senior civilians (GS/GM 15-SES) and encourage an across function exchange of information and ideas, the division established the AMC Exchange Program (AMCEP) in March 1985. The AMC Announcement Distribution System (AMCADS) was expanded to include nine career programs. AMCADS augmented local CPO recruitment efforts to fill Army-wide EEO, SES, Engineers and Scientists, Non Construction (NC), and Alcohol and Drug Abuse vacancies. During the rating period, six training programs/courses were developed and promoted to augment the technical and presentations skills of AMC careerists. They included the Advanced Studies Program for Interns, Action Officer Orientation Course, Comptroller and ORSA Fellowship programs, ORSA E&S Training and Development Program, and the Test and Evaluation Engineer Training and Development Program.

AMC Exchange Program (AMCEP) (U)

(U) The AMC Exchange Program was approved by the CG and implemented March 1985 as a pilot in HQ AMC. The program was designed to facilitate the development of senior civilians, GS/GM-15 and members of the SES through short-term cross-functional/interfunctional assignments. Program

54 Managing the PMRS Rating Profile.

guidance to include Commander's Guidance Statement #76[55] was provided to all major subordinate commands and Project Management Offices. The pilot course was implemented with HQ AMC in March 1985 with the activation of five cross-functional assignments. Evaluation of these assignments was positive and the program was approved for expansion throughout AMC in August 1985.[56]

Logistics and Acquisition Management Program (LOGAMP) (U)

(U) The LOGAMP was established November 1983 as a DA wide program jointly sponsored by the HQDA DCSLOG, HQDA DCSPER and CG AMC, to satisfy the Army's need for structured training and career development for civilians in the logistics and acquisition management process. Competitively selected high-potential logistics and acquisition employees, GM/GS 13-15 participated in multi-disciplinary development assignments designed to provide necessary background for senior executive service positions. Career programs included in LOGAMP were expanded in FY85 to six disciplines: Supply, Procurement, Quality and Reliability Assurance, Materiel Maintenance Management, Engineers and Scientists (NC) only, and Transportation.

(U) It was composed of three parts: Enhancement of Career Specialties; Competitive Development; and Staffing Key LOGAMP Positions. The competitive Development Phase was announced DA-wide[57] in March and August 1984. All MACOMs were requested to submit individual nominations which resulted in 188 Army civilian employees, representing CONUS and OCONUS, being competitively selected for participation in the program. In FY85, 56 participants were placed in developmental assignments which crossed command and functional lines and 92 participants received formal training. The Staffing Key positions phase was under development in FY85. In June, a DA-wide data call[58] of key designated LOGAMP positions was announced with the intent to identify, validate, and staff Key Logistics and Acquisition Management Positions.

Army Materiel Command Announcement Distribution System (AMCADS) (U)

(U) With the exception of AMC EEO and DA SES positions, AMCADS was a voluntary automated vacancy announcement distribution system. The system was developed by HQ AMC in FY82 as a result of the disestablishment of Army's centralized referral system for Engineers and Scientists (NC) and was supported by the AMC Logistics Systems Support Agency at Tobyhanna, Pennsylvania. It included Civilian Personnel, Comptroller, Supply, materiel Maintenance, Automatic Data Processing, Transportation, Training,

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55 CGS No. 76, HQ AMC, AMCPE-CC, 29 Mar 85, subj: AMC Exchange Program.
56 Ltr, HQ AMC, AMCPE-CC-C, 28 Aug 85, subj: AMCEP.
57 Ltr, HQ AMC, AMCPE-CC-C, 21 Jun 85, subj: LOGAMP.
58 Msg, HQ AMC, AMCPE-CC-C, 21 Jun 85, subj: LOGAMP.

Education Services, Equal Opportunity, and Engineers and Scientists (NC). In FY85, AMCADS was expanded to include Alcohol and Drug Abuse, and SES registrants.[59]

Training and Development (U)

(U) Manufacturing Training with Industry (TWI). The TWI program was one of several initiatives implemented in FY85 and designed to enhance the capabilities of AMC engineers. The 12-month TWI program provided four selected production engineers the opportunity to acquire direct manufacturing experience by working with private sector host firms in FY85. Two assignments were approved for FY86.

(U) Advanced Manufacturing Engineering Studies. Another production engineering initiative introduced in FY85 was the Advanced Manufacturing Engineering Studies which offered engineers the opportunity to undertake a 12-month full time graduate level program concentrating on manufacturing/production engineering at participating universities such as University of Michigan, University of Massachusetts, Massachusetts Institute of Technology, Boston University and Lehigh University.

(U) Operations Research Systems Analysis (ORSA) Fellowship Program. The ORSA Fellowship Program which was implemented in FY85, provided ORSA careerists insight into techniques and methodologies of ORSA used within AMC and HQDA. Two fellows participated in FY85. In FY86 the program would be HQDA resourced for four fellows.

(U) Brookings - Quality and Productivity in American Industry. At the request of the DCS for Product Assurance and Testing, arrangements were made with the Brookings Institution to conduct a 40-hour course in quality assurance and control procedures, design and engineering aspects of quality assurance, manufacturing designs, and other manufacturing complexities. In FY84, 54 civilians and 10 military attended the first course and 63 civilians and 20 military attended in FY85. In FY86, the program would be announced DOD-wide with 25 spaces reserved for AMC participation to include 20 civilians and three military each session.[60]

(U) Action Officer Orientation. To acquaint new AMC action officers with missions and organization of AMC and to introduce principles of effective staff writing and briefing, the CG tasked Civilian Personnel Division to develop and conduct an orientation course to be given all new AMC action officers. The four courses conducted in FY85 trained 191 action officers.

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59 Ltr, Ch, Alcohol and Drug Abuse Ofc, Ofc of Deputy CofS for Personnel, AMCPE-H, to Dir, USA Drug & Alcohol Tech Acty, 14 Aug 84, subj: ADAPCP.

60 Ltr, Asst Deputy CofS for Personnel, AMCPE-CC-T, 13 Sep 85, subj: The Brookings Institution - Special Seminar on Quality and Productivity in American Industry.

(U) Personalized Learning and Training Opportunities (PLATO) Computer-Based Instruction (CBI). DOD issued policy to accelerate use of CBI in training arenas. OSD provided management and funding support to develop a government owned and operated CBI network for various Federal agencies on a cooperative basis. By Memo of Agreement signed by AMC Chief of Staff, 26 June 1984, AMC entered into tri-Service agreement of sharing on-line course ware offerings. AMC installations included in CBI network totalled 170 PLATO terminals with both on-line and off-line capabilities at 41 locations. PLATO was originally developed by the University of Illinois for the Department of Army Research Products Agency. When its 10-year contract ended, proprietary rights and existing software were purchased by Control Data Corporation (CDC) which maintained a library of over 13,000 courses. The on-line library and the capability to develop course ware generic to individual mission needs would be available to AMC subscribers. As costs of equipment and installation were to be borne by OSD Productivity Improvement Funds, end user costs were not expected to exceed $500 monthly which would be less than the cost of a one-week course for one person at OPM.

Staffing (U)

(U) Concerning the status of collateral personnel involved with the security function, updating the occupational standards for security guards and police was an important concern during FY85. Threats of sabotage and terrorism made it essential to have a well qualified, adequately paid, physically fit, drug free guard force.

(U) Hiring and maintaining a force to meet these standards was not possible without obsolete classification, qualification, and physical standards being updated. To accomplish this, AMC had been attempting for some time, with DA and DOD assistance, to convince OPM to reactivate studies of guard and police standards which were begun in 1980 and 1983. After October 1985, no action was taken by OPM. AMC did monitoring and shared efforts made by other agencies to upgrade guard and police physical and performance standards.

Employee Management (U)

(U) The command-wide sick leave rate for FY854 was 58.98 hours per employee.[61] Although AMC exceeded its goal of 58 hours of maximum sick leave usage in FY85, the command did achieve a substantial reduction of 2.02 hours from FY84. Noteworthy were the accomplishments of TROSCOM[62] and TECOM who reduced their sick leave by 13.2 hours and 14.9 hours respectively. The challenge for FY86 was expected to be more difficult in the effort to meet ongoing DA goals to reduce by 5 percent each year until reaching an average of 48 hours sick leave per employee each year. The AMC goal for FY86 would be 56 hours.

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61 DISUM, HQ AMC, AMCPE-CE-L, 15 Feb 85, subj: Supervisor's Guide to Management of Sick Leave; AMC-P 5-2.

62 Ltr, GEN Thompson to GEN Wickham, 31 Oct 85, subj: TROSCOM sick leave.

(U) In order to enhance both the awards and suggestion programs, HQ AMC conducted the AMC Commander's First Annual Recognition Day Awards Ceremony on 23 May 1985. The CG presented 30 awards and citations to military and civilian employees who made outstanding contributions to mission accomplishments. MSCs and Separate Reporting Activities who made significant strides in the suggestion program during FY85 were recognized. Awards were also presented to outstanding AMC activities, the AMC family of the year, and two members of the US Army Band.

Command Office of Equal Opportunity (U)

(U) Command-wide, the Office of Equal Opportunity continued during FY85 to manage and direct the Equal Employment Opportunity (EEO) and Equal Opportunity (EO) Programs to provide a work environment free of discrimination because of race, color, religion, sex, national origin, age or physical/mental handicap.

Workshops and EEO Training (U)

(U) The Equal Opportunity Executive Seminar for AMC headquarters was conducted on 7 December 1984. A total of thirty General Officers, SES members, and Deputy Chiefs of Staff and separate office chiefs actively participated in this session. In addition to presentations from members of the EEO, CPO and legal offices, the executives met in separate workshops to plan an effective approach for the headquarters' supervisory EO/EEO training program. The Chief of Staff highlighted the seminar by delivering the Commanding General's expectations for the management environment he wanted to create: to continue to make progress; to find innovative solutions; to be accountable and require that subordinates be accountable for their performance in this area; to communicate commitment up and down the chain; to treat people problems as matters of top priority; to commit the time and effort necessary to get the job done; to get to the bottom of EEO and Personnel Management problems; to get DCSs/SOCs personally involved in selections at grade 13 and above.

(U) AMC held a highly successful Equal Employment Opportunity/Equal Opportunity - Civilian Personnel Officer Conference in Atlanta, Georgia from 28 January to 1 February 1985. The theme for the conference was "Human Resources - The Key to Leadership". The conference objectives were to review and evaluate the impact of actions programmed from the 1984 conference; to exchange ideas and successes for betterment of people programs in AMC; to evaluate and program AMC directions for progress; and to plan future actions around evolving changes in the personnel/equal opportunity climate of the Army and the Federal sector. General Thompson was the guest speaker at the conference banquet, and his verbatim remarks, containing his people policies and guidelines, were distributed command-wide under a cover letter from the AMC Chief of Staff on 26 February 1985.

(U) A "Women in Search of Excellence" Seminar was held 14-16 May 1985 at the Hyatt Hotel, Arlington, Virginia. Word-of-mouth endorsements, a story in the "Interchange" and timely requests for applications resulted

in an overwhelming response from women GS/M-12 and above. The Chief of Staff visited students to underline support and communicate leadership ideals.

(U) As a result of the briefing on the concept and initial design of an AMC EEO Information System held on 8 July 1985, the Functional Coordinating Group for EEO Management Information Systems was established with Mr. Julius Crouch (ALMSA) as the Chair. The system concept consisted of four modules: affirmative actions, case tracking (complaints processing), equal opportunity (military), and workplace automation tools. The system was being designed around the Intel 310 Microcomputer. The Director of ALMSA was supporting its development and was furnishing support from his own resources. DA and MACOMs asked to be kept informed. The time schedule called for the system to be in place by 30 September 1986.

(U) The FY85 AMC Complaints Processing Training Workshop was held in Memphis, Tennessee on 11-12 September 1985. The 27 participants from 26 installations were selected from 50 nominations. Comments from critiques indicated that this was an excellent workshop providing comprehensive information, resource materials, and group participation. This was the fourth in a series of workshops to provide training to correct deficiencies in complaints processing and to promote compliance and proper application of regulatory and policy guidance. A high rate of improvement was noted following each of these workshops.

(U) The AMC Director of EO/EEO identified the need for an AMC Legal-EEO Workshop to provide special training to insure the legal sufficiency of commanders' decisions on complaints of discrimination. This issue was discussed in a special working session of the AMC EEO/EO-CPO conference in January 1985. The participants in that session stated that such a session was needed, and did some initial definition of cases to be covered. Based on this, representatives of the Personnel Office and the Command Counsel designed a program of instruction and prepared a recommendation for the Chief of Staff. The Chief of Staff approved the concept and two sessions were planned--one to be held in St. Louis, Missouri in September 1985 and a second in San Francisco, California in December 1985. The workshops were well attended and well received.

(U) Affirmative Action Planning. The AMC Multi-Year Affirmative Action Program Plan for FY82-86 received continued command emphasis and support. This was the first plan that attempted to set goals for more than 1 year at a time.

(U) Complaints Processing. A total of 243 formal complaints were filed throughout the command during FY85; 47 were closed with one finding of discrimination. (See chart next page).

(U) Statistical Data. The total work force decreased in FY85. There was a decrease in the lower and middle grades of 2,202 and 251 respectively. The higher grades had an increase of 499 while the Executive Service remained constant. In spite of this decrease in the

EQUAL EMPLOYMENT OPPORTUNITY COMPLAINTS

1 October 1984 - 30 September 1985

	No. Filed	No. Closed	
		No. Discrimination	Discrimination
Race/Color	115	24	1
Religion	3	1	-
Age	46	9	-
Sex			
Female	29	6	-
Male	6	1	-
National Origin	14	1	-
Handicap	27	3	-
Other (Reprisal, Harassment, etc.)	3	1	-
	243	46	1

total work force, AMC continued making significant EEO gains. Both women and minorities gained in numbers and/or percentages in all categories except the super grades and minorities in the lower grades. (Chart next page)

Special Emphasis Programs (U)

(U) Hispanic Employment Program. The number of Hispanics in all pay plans at the end of FY85 totaled 6,336 or 5.5 percent of the total work force. This reflects a numerical increase of 336 over FY84. Even though the overall percentile increase of Hispanics dropped from .2 percent per year to .1 percent in FY84. The percentile increase in the GS9-12 and GS/GM13-15 categories went from a .1 percent annual increase to a .2 percent increase in FY85.

(U) The Command HEPM continued to serve as a resource person to the AMC Field Placement Office, Atlanta. As a result of participation in recruitment visits to the University of Puerto Rico, Mayaguez campus, the HEPM helped to recruit 12 Hispanic engineers for employment in AMC's Engineering Intern Program. The FY85 recruitment trip included a second university (UPR, Arecibo) and interviewed students for Schedule B as well as engineering positions. Five Schedule B students came onboard in FY85 as result of this trip.

(U) Federal women's Program. The representation of women did not improve significantly in FY85. However, the pipeline to high grade levels remained healthy. Although some goals were not met, AMC did experience numeric increases in all but one category. General Thompson continued to be concerned about AMC's not meeting its goals for minorities and women at the GS-12 and above grade levels. Renewed emphasis was being placed in this area throughout the command. Numeric and percentile increases for Hispanics and women showed the positive effect this emphasis had.

Military Equal Opportunity Program (U)

(U) Program Management. As part of a renewed emphasis, staff assistance visits/program evaluations were conducted by EO staff personnel at four major subordinate commands: AVSCOM, MICOM, TROSCOM, and DESCOM (three depots). SFC Holmes of the AMC Office of Equal Opportunity assisted HQ DESCOM in conducting an EOA Course held in Pueblo, Colorado from 3-7 June 1985, for their part-time officer and enlisted EOAs. The purpose of the course was to instruct the military EOAs and depot-level chiefs of EO offices, who also attended, about their duties and responsibilities in administering the Army's EO program. Personnel from all the depots received instruction in EO education and training programs, complaint management, affirmative action plans and statistical reporting.

(U) Staffing. Equal Opportunity Staff Officer (EOSO) authorizations were increased from 7 to 10 in January 1985 when HQDA gave the command three out-of-cycle EOSO authorizations. However, these positions had not been filled at yearend, and five EOSO positions were encumbered. Equal Opportunity NCO authorizations increased from 22 to 23

PROGRAM STATISTICS

MINORITY/WOMEN

	30 Sep 84			30 Sep 85		
	Total Work Force	Minority	Women	Total Work Force	Minority	Women
Lower Grades (GS/WG 05-09)	49,894	10,024 (20.1)	20,690 (41.5)	47,692	9,520 (20.0)	20,223 (42.4)
Middle Grades (GS/WG 10-12)	35,393	5,077 (14.3)	5,636 (15.9)	36,142	5,342 (14.8)	6,443 (17.8)
High Grades (GS 13-15 and WG 13-15 and all WS and WL)	16,164	1,653 (10.2)	819 (5.1)	16,663	1,820 (10.9)	987 (6.1)
Executive Service	129	5 (3.9)	2 (1.6)	129	6 (4.7)	1 (.8)

with the establishment of an authorized position at Seneca Army Depot. This was the highest percentage of filled EO NCO positions the command had ever obtained.

(U) Education and Training. During FY85, 95.6 percent of civilian supervisors of military personnel received training in Equal Opportunity, and 93.7 percent of military personnel were trained.

(U) Promotions. The EO staff conducted quarterly assessments of the E5 and E6 promotion rates. There was a slight overall improvement in the E5 and E6 promotion rate compared with FY84.

(U) Military Justice Actions. During 1985 the total number of Article 15s given to minority soldiers decreased from the number given in FY84. Even though the number of courts-martial given in FY85 decreased, the number given to minority soldiers increased. Minority soldiers received five out of eight courts-martial for FY85.[63]

Information Management (U)

(U) Readiness. A total Army prepared for the "Three Days of War": to deter the day before war; to fight and win on the day of war; and to terminate conflict in such a manner that on the day after war, the United States and its Allies have an acceptable level of security.

(U) Materiel Release Order (MRO) Rewrite. LSSA completed a rewrite of selected materiel release order ADP tasks in the MRO processing system. The rewrite resulted in significant computer time savings at the depots and MRO documentation being delivered to supply operations personnel four hours earlier in the day.

(U) Total Package/Unit Materiel Fielding (TP/UMF). TP/UMF was the largest single new AMC mission that was supported by ALMSA in FY85. A fielding requirement data base allowed for the automated management of the total materiel requirements list needed for a weapon system or unit fielding. Requisitions were generated and funded automatically. Retail automated systems documentation was produced automatically.

(U) Work Ordering and Reporting Communications System (WORCS). ALMSA released WORCS to all MSCs on 15 August 1985. WORCS was a total management system for Procurement Work Directives (PWDs) received and issued to sources outside the MSC. The system included the capability for sending and recording all PWDs for hardware and services, all appropriations and type of financing. This system was expected to minimize manual entry of data and provide external reporting automatically through normal file update.

(U) Duplicate Emergency Files (DEF) Program. DEF Program was established to ensure the survivability of documents required by a headquarters for essential operations in an emergency.

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63 Office of Equal Opportunity historical submission, FY85.

(U) AMC Program Managers (PM) Secure Voice Net. The AMC PM Secure Voice System was a network to provide secure voice communications between HQ AMC and 35 AMC PM and their contractors throughout CONUS. On 30 September 1985, 32 PMs and 32 contractors were operational with terminals scheduled for completion during FY86.

(U) CONUS Telephone Modernization (TELMOD). The AMC telephone network employed archaic switching methods. The TELMOD program was a project to upgrade these switches with digital electronic switching systems. This program included 35 AMC switches. New electronic switches were successfully replaced at ARDC (Dover), AMCCOM (Rock Island), and TECOM (Aberdeen). Seven more AMC locations were in the competitive acquisition process. A related program to upgrade base transmission (cable) facilities was also underway.

(U) Test and Prototype of Automated Autodin Interface (AAI). NCR COMTEN AUTODIN package and the AAI were installed at AVSCOM in November 1984 for familiarization tests. AAI passed the DCA certification in April 1985. The prototype of AAI was successfully conducted at AVSCOM during May and June 1984. Proliferated AAI to the next MRC (TACOM) was made during August 1985.

(U) Single Process-Integrated File (SPIF). When TSARCOM was split into AVSCOM and TROSCOM, AMCIM conducted a study to determine the most cost-effective method of providing each of the commands with its required data processing support. The most obvious solution was to reestablish two unique data processing installations, with a full array of redundant hardware. A more logical alternative involving major modification to the Commodity Command Standard System (CCSS) software was also considered. After evaluation of the costs of the two solutions, the second was found to be substantially more cost effective and was chosen, at a net expenditure avoidance of approximately $2 million. Such modifications were delivered on time to meet the mandatory 1 October 1985 requirement.

(U) Conversion of Data Bank Systems from the Control Data Computer 3300 to IBM Plug Compatible Machine. LSSA completed a 2 1/2 year project to convert 88 systems from Control Data 3300 to state-of-the-art hardware and data base management systems. The Control Data computer was released in August 1985. This conversion effort provided on-line data access query capabilities to the AMC staff with significant improvements in systems reliability and response time.

Human (U)

(U) ADP Intern Class (ALMSA). AMC objectives were to attract highly qualified candidates which would otherwise not have entered the career field because of hardships encountered through long-term training. One class was held September-December 1984 at Southern Illinois University, Edwardsville, Illinois. The benefits of offsite training greatly enhanced the learning environment, class average was one of the

highest recorded by AMETA and the highest ever recorded by ALMSA. Travel and per diem savings were realized by conducting the class at a site that minimized the interns' travel.

(U) EEO Update at ALMSA. The women workforce, which increased by 1 percent CLF was within .6 percent of the St. Louis Civilian Labor Force (CLF). The black male was increased by .5 percent, bringing it within .7 percent of the CLF. The black female CLF was increased by .8 percent, putting it over the CLF, along with the American Indian. Women and minorities were well represented in upper management positions. There were 11 women in grades GM-13 through GM-15 and 10 males in grades GM-13 through GM-15. There was a total of 21 women and minorities in upper management positions which represented .21 percent of the total workforce. Concerning overall EEO goals, steady progress was made; however, improvements were required in the area of women in higher levels of management.

(U) UNIX ADP Intern Program. AMC developed a new ADP intern training curriculum specifically designed to support the office automation environment. The interns produced from this curriculum would serve as systems administrators for support of the micro-computer systems acquired for HQ AMC. Two classes were graduated with the third, and probably last class scheduled for graduation in November 1985.

(U) Productivity Center Planning Committee (PCPC). The PCPC was established to identify the attributes and properties of the design automation tools to be used at ALMSA and to develop a plan for acquisition and use of a tool kit. The objectives of developing a tool kit were to provide for standardization of methods and increase productivity. The mission was accomplished 2 May 1985 with the submission of a report containing the required plan with proposed milestones.

(U) Army Privacy Program. Proposed forms, requesting personal information on individuals, were reviewed to ensure that they were in compliance with the Privacy Act of 1974 and AR 340-21, and to ensure that new or revised systems of records subject to the Privacy Act were published in the Federal Register.

Materiel (U)

(U) Security Assistance Automation, Army (SA3). The SA3 was an army-wide project that would provide necessary automated hardware, software and communications in order to fully support the US Army Security Assistance Program. Phase I of the SA3 design included a Security Assistance case management centralized data base within the CCSS environment that would provide a single repository for case management data elements. Phase II design and programming was scheduled to begin prototype testing; and Phase III would be implemented in FY86.

(U) DA Micro Computer. The DA Micro Computer Buy was implemented in 1985. LSSA was assigned the responsibility to convert office support software to operate on the DA Micro Buy computer. This conversion effort was completed and guidance was distributed to the field on the procedure to be used by any AMC organization to acquire that software.

(U) Maintenance Shop Floor System. The Maintenance Shop Floor System was developed and prototyped at Corpus Christi Army Depot and accepted by DESCOM as the standard shop floor system for the depots. This system automated all of the shop floor operations and projected payoffs for the customer of $39.121 million through FY93. It was planned to field the shop floor system at all DESCOM installations by November 1986.

Future Development (U)

(U) Multi-Function Workstation (MFWS). The MFWS provided a baseline set of automated tools for the office environment. Tools provided in the initial release were: User - Interface to file system utilities; Editor - Text editor; Output - Text formatter; Message - Electronic Mail; Track - General purpose project/suspense tracking; Toolbox - Access to other AMC tools and locally-developed tools; Calculator - Full function scientific calculator. MFWS was successfully prototyped at HQ AMC during FY85.

(U) ALMSA Strategic Plan. The ALMSA strategic planning effort developed the first long-range plan, directions, and concepts for automation to support the needs of DA and AMC into the 21st Century for future information systems, corporate data bases, and advanced computer technology. Major objectives and sub-objectives in the ALMSA Strategic Plan included the development of a 3-tier technical architecture, evolution of the CCSS into an information systems architecture, use of design automation tools, development of a standard workstation, use of a standard data dictionary/directory in conjunction with Local Area Networks (LAN) and the Defense Data Network (DDN).

(U) Supercomputer Network. After acquiring AMC approval in 1984 for the supercomputer network, DA supported a request for FY86 congressional reprogramming which was favorably received by DOD and Congress. Ballistics Research Laboratory (BRL) was selected as the location for an interim supercomputer and the follow-on "target" supercomputer.

(U) Information Supply System (ISS). ISS was an automation tool which would provide the capability to retrieve information stored in remotely distributed heterogeneous data bases, using an English language query capability, without requiring the requestor to be aware of either the physical location or method of that information. Plans called for the installation of a prototype ISS configuration at the Security Assistance Office at AMCCOM during FY86.

(U) Army Electronic Mail. Representatives from Army Commands, including the Information Systems Command, AMC, 7th Signal Command, Force Development Command, TRADOC, the Intelligence and Security Command and DA

Staff Information Management, attended initial meetings which resulted in the standardization of Army electronic mail. The revised procedure was expected to enhance capabilities to communicate at all levels within an organization and across commands.

(U) AMC Video Teleconferencing Network. AMC, through ISC and DCA, manages contracts for an AMC ten-studio, CONUS-wide, multipoint, secure, full motion, digital video teleconferencing network for FY86 implementation. This was the first of its kind within Government.

(U) Standard Depot System at Mainz. Preliminary work was accomplished during FY85 which was expected to lead to exporting the Standard Depot System to Mainz Army Depot, West Germany. Mainz was scheduled to receive the Standard Depot System supply applications by 1 October 1986.

Management (U)

(U) Local Area Networks. AMC installations were directed to develop common user local area networks, which would serve as the final stages of distribution for DOD-wide area networks providing connectivity between subscriber terminations. This was in consonance with Army doctrine on information system architecture and provided the key link in the Three-Tier Architecture. Thirty-four installations were considered for the installation of broadbank LANs. Seven already had some degree of LAN capability installed. The remainder were either in the engineering process by US Army Information Systems Engineering Command, or had been included for planning in the 1985 IMP submissions.

(U) AMC Data Dictionary. The purpose of the AMC Data Dictionary was to provide a vehicle for common understanding and control of data among users of standard systems within the AMC community. Products of the AMC Data Dictionary were all the CCSS Release 70 Copy Members and File Guides. The AMC Data Dictionary was installed at AMCCOM to support the DOD Standard Ammunition program.

(U) ALMSA Tiger Team. An ALMSA Tiger Team was formed to determine the ADP vulnerabilities of AMC MRCs. A team exercise was conducted at CECOM in February 1985 and AVSCOM in May 1985, and the results were sent to ADPSSO. The results of these exercises brought about increased security awareness throughout AMC, identified areas of vulnerability, and promoted solutions.

(U) Competition in Contracting Act of 1984 (CICA). Critical changes for initial implementation of CICA were successfully proliferated to all MSCs in order to comply with the law on 1 April 1985. Revised CICA changes for negotiating authority and extended competition code were proliferated during the week of 29 April 1985.

(U) Breakout Savings Report. In December 1984, ALMSA played a major role in in providing AMC with programs that extracted CCSS data essential to providing input to the Breakout Savings Report required by DOD on 10 December 1984. As a result of total effort, HQ AMC was able to identify $53.3 million in actual savings and an additional $134.9 million in estimated savings within scheduled deadlines.

(U) Congressional Action on Acquisition of ADPE. The 1984 Appropriations Bill Conference Report placed significant restrictions on future ADPE leasing and requested a comprehensive study be conducted of all existing leases to determine if purchase would be more economical. AMC developed, in accordance with HQDA guidance, a 5-Year Buy-Out Plan spanning FY84-88. This plan allowed for progressive purchase of all existing AMC ADPE which was not technically obsolete and all planned leases approved prior to congressional restrictions. Projected lease savings for both existing and planned leases over a 5-year period was $136 million. The total purchase dollars required to realize this savings was $52 million. Results of the FY84 buy-out period ending June 1985, was the purchase of $3.6 million of leased AMC ADPE culminating in a $19 million savings in lease costs over the subsequent 5 years.

(U) General Ledger by Mission (GLA). GLA was LSSA's and HQ DESCOM's number one financial priority project. This initiative would capture actual financial data by mission, facilitating the comparison of budgeted data with actual data. This project was expected to be implemented on 1 October 1985 in all DESCOM depots and three AMCCOM ammunition activities, and would significantly reduce manual effort.

(U) Information Systems Plan (ISP). The ISP was a technique that enabled organizations to identify critical information and provide a priority architectural baseline for the information systems required to support management needs. It was a strategic plan and would be used for AMC's Information Management portion. The HQ AMC ISP was completed in April 1985. The recommendations and 48 resulting actions were assigned. Guidance for completing ISPs was distributed throughout AMC.

Training.

(U) Multi-Machine Scheduler (MMS) to Pacific. The MMS was the AMC standard scheduling system for CCSS processing in the IBM environment. USASCH MISO, Fort Shafter, Hawaii, was also a user of MMS. Due to their successful use of MMS it was requested for use in the Pacific ADP Service Centers. During FY85, MMS was installed by ALMSA personnel at both Tageu and Seoul, Korea.

(U) Computer Literacy Course. With the advent of new computer automation development, the rapid deployment of associated new technologies and the increasing demand for personal interaction with computer systems. A need existed for computer literacy training. DCSIM in collaboration with ALMC personnel developed an initial Program of Instruction that introduced contemporary topics and techniques,

demonstrations and practical exercises. The first class was held in January 1985 at Fort Lee, Virginia. Class room hardware was available for actual "hands on" use. A large enrollment for FY86 was expected.[64]

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64 State of the Nation, FY85, AMCIM.

CHAPTER II

FORCE MODERNIZATION (U)

(U) This chapter discusses a number of programs that directly impacted Force Modernization. It also discusses efforts to develop, upgrade and field specific weapon systems, although in this area an interested reader should also consult the Annual Historical Reviews of the relevant commodity commands. In addition, it should be noted that Force Modernization encompassed much of the mission of AMC during this fiscal year, and not only information in this chapter but much that is discussed in the rest of the history is concerned with the issue of Force Modernization.

Force Modernization Programs (U)

Total Package/Unit Materiel Fielding (TP/UMF) (U)

(U) On 17 August 1984 the Functional Area Assessment of the TP/UMF program was presented to the VCSA. It showed that the 8-item test in FY84 had been a success, and as a result the system was expanded to 24 systems for FY85. Of the 24, 13 were actually fielded in FY85, with the remaining systems slipping to later dates for a variety of reasons. In addition, AMC was directed to develop a schedule for the expansion of the program in FY86 and beyond. Subsequently, an additional 57 systems were approved for FY86 fielding, and AMC proposed that TP/UMF be used for all AMC fielded systems in FY87. In February 1985 the VCSA also directed that the TP/UMF procedures be used in tests for converting and activating Attack Helicopter battalions with the Apache helicopter.

(U) FY85 saw the programming completed for the main TP/UMF management tool, the Fielding Requirements (FRET) Data Base, which would enable fielding commands to generate requisitions on line and to track how well they were filled.

(U) On 1 June 1985 an interim DA Circular on TP/UMF policy was published. It was to expire 1 June 1986, by which time the TP/UMF would have been incorporated into permanent Army regulations on materiel fielding. This new regulation was the result of a direction from HQDA DCSLOG that AR 700-127 be revised. Although AR 700-127, on Integrated Logistics Support, contained a chapter on Materiel Fielding/Transfer, "HQ AMC recognized the need for one cohesive document providing regulatory guidance on materiel fielding/transfer and materiel release." During FY85 a new draft regulation was thus being prepared on materiel fielding/transfer. At the same time, AR 700-127 on ILS was being revised, and a new DA Pamphlet 700-xx,

Instructions for Materiel Release/Transfer, was being drafted. These draft regulations were staffed Army-wide and it was anticipated that they would be sent to HQDA in December 1985. In addition, MRSA published a TP/UMF regulation, MRSA Pamphlet 700-6, which contained a foreword by General Thompson.[1]

Integrated Logistics Support (ILS) (U) [2]

(U) ILS was part of the management process in support of overall Force Modernization. The ILS management goals were to:

a. Influence materiel system requirements and design to achieve and sustain established levels of operational readiness while minimizing support requirements.

b. Insure that all elements of manpower, training, and logistics are planned, developed, tested, evaluated, procured and deployed concurrently with materiel systems.

c. Prepare the actual user and the functional personnel, training and logistics systems to operate and support materiel systems when fielded.

d. Provide procedures to integrate and acquire the ILS elements effectively.

e. Improve logistics interoperability and standardization of materiel within DA, other Services and allied nations.[3]

(U) Army Management Milestone System. This new reporting system would compile the current ILS Milestone Reporting System and the Force Modernization Milestone Reporting System. Work was underway to develop this new automated system.[4]

(U) ILS Reviews and Analyses. In the third quarter of FY84 AMC had started doing a review and analysis of its ILS operations to show its performance in various areas of ILS. In FY85 action was underway to automate all but the narrative portion of the review and analysis, and it was anticipated that it would be exported to the MSCs and PMs in FY86. In the third quarter of FY85 the first DA ILS review and analysis was produced.[5]

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1 SMT AHR input, FY85.

2 For the reorganization of the ILS Division at HQ AMC, see the section on SMT in the Materiel Readiness chapter.

3 AR 700-127, Logistics: Integrated Logistics Support, 15 May 1983, paragraphs 1-7 and 1-8.

4 SMT AHR input, FY85.

5 Ibid.

(U) ILS Funding. The DARCOM ILS Program Study of 1982 had recommended that the visibility and control over ILS funds be improved. In response AMC published, in May 1984, AMCR 700-26 which provided the official AMC structure to accomplish that recommendation by fencing ILS funds. In 1985 implementation efforts focused on resolving several issues concerning the basic approach of the regulation, "do the potential benefits of the ILS funding policies as imposed by the regulation offset costs in personnel and other resources necessary to install and operate the required new procedures?" Discussions between AMC's DCS for Supply, maintenance and Transportation and the DCS for Resource Management resulted in the establishment of a proposed course of action that would be presented to the command group for approval during the first quarter of FY86.[6]

(U) DA Pamphlet 700-55. AMC had been tasked to prepare DA Pamphlet 700-55, Instructions for Preparing the Integrated Logistics Support Plan. It was published on 28 June 1985.[7]

System Operational Readiness Review (U)

(U) In 1984 the Vice Chief of Staff of the Army asked that AMC develop a system for the user and materiel developer to get together early in the materiel fielding process in order to discuss problems and corrective actions for them. The vehicle devised for this purpose was the System Operational Readiness Review (SORR). It consisted of meetings held from six to nine months after the first unit equipped date and culminated in a two-star meeting jointly chaired by TRADOC and AMC. The pilot SORR was conducted in April and July 1985 for the Multiple Launch Rocket System (MLRS). It developed corrective actions for problem areas in the fielding of the MLRS and also served as a basis for a joint AMC/TRADOC regulation on the SORR which was to be published in the fourth quarter of FY86.[8]

SMT's Force Modernization Integration Division (U)

Reorganization (U)

(U) In June 1985 SMT's Force Modernization Integration Division lost some personnel and functions when responsibility for the management of AMC's input into the VCSA Functional Area Assessment Program and responsibility for the CG, AMC's Program/Product/Project Manager Materiel System Assessment (PMSA) were transferred out of SMT. They were transferred into a new System Assessment and Program Office in the Office of the Deputy for Management and Analysis. In FY85, 15

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6 Ibid.
7 Ibid.
8 Product Assurance and Test AHR input, FY85.

PMSAs had been presented to the CG, AMC, resulting in 292 issues and 506 actions that were worked on by HQ AMC and its subordinate commands and activities.[9]

Functional Area Assessments (FAA) (U)

(U) The VCSA had directed a series of FAA to review the Army's ability to execute its Force Modernization Program by ensuring that all factors relevant to organization development and materiel system acquisition and fielding were properly integrated. AMC's role in the FAAs was to examine selected new equipment to assure that problems were identified for solution prior to fielding. After the FAA, AMC was usually assigned actions in its areas of responsibility to correct deficiencies disclosed by the FAA. In 1985, 12 FAA were completed.[10]

FY85 FAAs

FAA	Date Presented to VCSA	Total Actions	Total AMC Actions
Adjutant General/ Finance/Chaplain/ Public Affairs	18 Oct 84	91	0
Military Police	19 Nov 84	63	4
10th Infantry Division	20 Dec 84	153	16
Biological	10 Jan 85	72	21
Transportation	5 Feb 85	78	3
Special Operating Forces	2 Apr 85	222	17
Test and Evaluation	13 May 85	69	21
Mobilization	23 May 85	204	2
Depot Maintenance II	30 May 85	--	--
Field Artillery	30 Aug 85	138	8
Decision Systems	11 Sep 85	130	12

Source: FAA Listing, 1 Nov 86

9 SMT AHR input, FY85.
10 Ibid.

DAIG Special Inspection of Force Modernization (U)

(U) The DA Inspector General conducted a special inspection of force modernization in the first half of 1982. As result, since 1983 AMC had been taking actions to resolve 100 issues raised by the inspection. By the end of FY85, 87 of the issues had been closed and the remaining 13 were expected to be resolved by the end of 1987.[11]

Army Modernization Information Memorandum (AMIM) (U)

(U) The AMIM, DA Pamphlet 5-25, was published annually by DA to provide gaining commands with technical and resource information on new materiel systems. It was also used by the Army staff for program reviews, budget submissions, and as a baseline to justify programs to the Office of the Secretary of Defense, the Office of Management and Budget, and Congress. AMC, which provided approximately 80 percent of the input into the AMIM, provided its input for the 1985 AMIM in October 1984. AMC and HQDA were also working together on an effort to automate the AMIM.[12]

Stratification Report of principal Items (U)

(U) AMC provided to the Army Finance and Accounting Center (USAFAC) each year a report on the total dollar value of principal items in storage and in the hands of the using organizations. USAFAC, in turn, used this for an annual report to the Treasury Department. In October 1985 AMC provided USAFAC with a flash report which showed that there were $49.0 billion worth of principal items in use and $32.7 billion in store for a total of $81.7 billion. The official report, including a narrative analysis, would be submitted in December 1985.[13]

Army Materiel Plan Modernization (AMP MOD) (U)

(U) AMP MOD was an effort to modernize the production of the Army Materiel Plan, which amounted to a requirements document for the Army, by replacing its obsolete automated generation system with a more modern system.[14] Increment I of the modernization plan involved software that would provide the capability to query and update on assets, losses, cost, procurement, maintenance, non-Authorized Acquisition Objective (AAO) requirements, and would also provide load and bridgeback capabilities to the previous automated system. Software development of Increment 1B was completed in April 1985 and software development of Increment 1C was completed in July 1985. The Major Item System Map programs were completed by Computer Data Systems Incorporated in September 1985. The Software Qualification Test (SQT) for Increment I was conducted at TACOM in August and September 1985

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11 Ibid.
12 Ibid.
13 Ibid.
14 For more on the Army Materiel Plan, see AHR for FY84.

with completion of the SQT scheduled for November 1985. Full implementation of Increment I was projected for 15 March 1986. Increment II was also scheduled to be phased in, with the first phase scheduled for FY87.[15]

(U) The contract for the AMP MOD automated data processing equipment had been awarded to the Federal Data Corporation on 9 November 1984 and by February 1985 the automated data processing equipment had been delivered at all Central Processing Unit Sites. By April 1985, all interim terminal equipment had also been delivered.[16]

Special Operations Forces (U)

(U) As part of a HQDA/AMC effort to improve the readiness of Special Operations Forces (SOF), the equipment on hand status of SOF units was reviewed. Actions which followed included redistribution of equipment, validation of requirements, and special actions to ship equipment out of DA Military Priority List (DAMPL) status. As a result of this program, 14 of 17 units identified as not meeting the minimum level of readiness were raised to at least combat ready status, and the readiness capability of 17 other units also were raised significantly.[17]

Light Infantry Divisions (U)

(U) An Army and AMC high priority task was fielding the Army's five new light infantry divisions. The Force Modernization Integration Division served as AMC's sole point of contact in support of this program. During 1985 more than 4,000 requisitions were submitted by the 7th Infantry Division in support of their reorganization into the Army's first light infantry division, and the Force Modernization Integration Division took action on all of them. To date, all the elements of the 7th Infantry Division transitioned on time with the required equipment having been provided. During FY85, the Force Modernization Integration Division was also active in support of the startup of the new 10th Mountain Division.[18]

Specific Weapon Systems (U)

Bradley Fighting Vehicle Systems (U)

(U) In FY85 the two Bradley Fighting Vehicle Systems, the M2 Infantry Fighting Vehicle and the M3 Cavalry Fighting Vehicle, were being assembled by the FMC Corporation's San Jose, California facility. The fourth year's production was complete and half of the fifth year's

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15 SMT AHR input, FY85.
16 Ibid.
17 Ibid.
18 Ibid.

production of 600 systems was also accomplished. Production was on schedule and the April 1986 target date for completion of the fifth year's production was attainable.[19]

(U) Projected improvements for the Bradley included the TOW 2 subsystem, a gas particle filter unit with a ventilated facepiece, an improved weapon interlock system, ammunition restorage, and other minor improvements that were to be included in new production vehicles as of 1986. The planned block II modification was to include an improved 25mm gun and its ammunition, improved armor protection, and improved survivability.[20]

M16A2 (U)

(U) Efforts continued in FY85 to determine if a day optic sight should be developed for standard use with the M16A2 rifle. TECOM tested a prototype M16A1 rifle designed by Colt Manufacturing which had a rail integrated into the upper receiver for mounting day and night sights. The Human Engineering Laboratory, following coordination with the small arms community, developed a plan to evaluate a rifleman's performance with a day optical sight versus the current iron sights. Tests were conducted at Fort Benning with both generic commercial optical sights and militarized sights. Although the results indicated a potential to acquire and hit operational targets at longer ranges using optical sights, it also indicated that additional testing was needed in bad weather conditions, arctic, close terrain, and low light conditions. Overall it was decided that the "results did not make a compelling un-ambiguous case for optics as a means of significantly increasing shooter performance." Plans were being formulated for a briefing in FY86 to the Commander of the US Army Infantry School and TRADOC to discuss the results of the test and to formulate the FY86 program on this topic.[21]

MK19 MOD 3 Grenade Machine Gun (U)

(U) In FY85 Development Testing II was completed and in September the Development Acceptance In-Process Review (IPR) was held. It was anticipated that early January would see the approval of the IPR minutes, which included changes to the 10 June 1985 Required Operation Capability statement and a recommendation that the weapon be type classified standard A. In addition, certification testing for the MK19 vehicle was continuing.

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19 DCS for Development, Engineering and Acquisition AHR submission, FY85.

20 DCS for Supply, Maintenance and Transportation AHR submission, FY85.

21 DCS for Development, Engineering and Acquisition AHR submission, FY85.

(U) The anticipated date for First Article Testing slipped to February 1986 because the contractor was having manufacturing difficulties in making the welded receiver for the weapon.

(U) A full materiel release was approved in June for the M430 40mm high explosive dual purpose cartridge, and full production was underway at the Milan Army Ammunition Plant. In addition, the M918TP training round with realistic ground effects was tested and was type classified in December 1985.

Squad Automatic Weapon (SAW) (U)

(U) AMC stopped acceptance of the SAW in May 1985 because of failures in the Production Comparison Tests and the discovery of quality defects. In addition, some user concerns surfaced which required weapon redesign. As a result, the Army stopped its solicitation for follow-on procurement.

(U) A 1985 AMC-TRADOC plan to correct the problems was agreed to on 21 November 1985 by the HQDA DCSRDA. It involved, at no cost to the Government, contractor quality fixes and a sole source contract to redesign the buttstock, barrel, and handguard to protect the soldier's hands from the hot barrel. The approximately 6,500 weapons already in the depot or the field were to receive the quality modification by the contractor at no cost to the Government. It was anticipated that the weapon with the redesigned handguard would be ready for fielding by December 1986, and that user modification for the barrel and buttstock would be fielded by August 1988.

(U) Some difficulties also existed with the SAW ammunition. Technical difficulties with ball and tracer cartridges at Lake City Army Ammunition Plant led to its having a delay in production. The problems with the ball cartridges were resolved and production commenced using tracer ammunition purchased from the manufacturer of the SAW, Fabrique Nationale (FN) of Belgium. Later testing in December 1985 by the US Army infantry school found American produced tracer ammunition to be superior to that produced outside the Continental United States, but the gunners still experienced difficulty in observing the tracer rounds. Various potential fixes were being considered.[22]

Mobile Protected Gun System (MPGS) Armored Gun System (AGS) (U)

(U) During FY85 the Army considered but rejected the use of the M551 Sheridan as an interim assault gun for the light infantry division, the 9th ID, because the Sheridan would not be supportable in the quantities required. Instead, the decision was made that the interim weapon would be the HMMWV armed with the tube-launched, optical-sighted, wire-guided missile (TOW) system. An Army Interim Motorized Infantry Division Concept Analysis, however, again validated

22 Ibid.

the light infantry's need for a kinetic energy anti-armor capability. The Vice Chief of Staff of the Army approved a Required Operational Capability statement for this Armored Gun System and directed AMC to pursue an NDI acquisition strategy to obtain it; however, the lack of funding for this project through FY88 "will probably preclude program approval."[23]

Advanced Anti-Tank Weapon System - Medium (AAWS-M) (U)

(U) The AAWS-M was planned to be a manportable, 33-45 pound replacement for the DRAGON that would have the capability of firing from within enclosures and of operating effectively in an obscurant and countermeasure environment. In 1985 ASARC I gave approval for a proof-of principle technical demonstration. A contract award was planned for September 1986.[24]

Foreign Equipment Upgrade Program (U)

(U) A number of equipment upgrade programs for American equipment now used primarily by friendly foreign nations continued through FY85. These upgrade programs included 105 Howitzer ammunition, Armor Upgrade, 90mm Recoilless Rifle ammunition, and 60mm Mortar. The Night Vision project was terminated due to lack of support from users. Toward the end of FY85, HQDA DCSLOG began a survey of allied and friendly countries to determine requirements for any additional upgrade programs.[25]

XM-43 Airview NBC Protective Mask (U)

(U) In 1985 the SM-43 mask transitioned from R&D to production. Due to its high success rate in testing and due to its maximum field of view, the user community was anticipating making it a General Aviation Mask.[26]

Army Helicopter Improvement Program (AHIP) (U)

(U) The AHIP completed its Operation Tests in FY85, with results that it met or surpassed its Required Operation Capability and Specification Requirements. At a Milestone III review production of 179 aircraft was authorized; however, additional testing was required to statistically prove that the AHIP was more combat effective than the current Scout helicopter.[27]

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23 Ibid and AMCR 700-26, May 1984.
24 DCS for Development, Engineering and Acquisition AHR submission, FY85.
25 Ibid.
26 Ibid.
27 Ibid.

CH-47D (U)

(U) Initial fielding of the CH-47D medium lift helicopter at Ford Campbell was completed. A five year multi-year contract for production of the CH-47D was awarded to Boeing-Vertol.[28]

T-800-XX-800 Engine (U)

(U) On 5 December 1984 a request for production (RFP) was issued for the development of the LHX T-800 Engine, and on 19 July 1985 contracts for it were awarded on a firm fixed price basis to AVCO/United, a joint venture of Pratt and Whitney and AVCO Lycoming, and to the Light Helicopter Turbine Engine Company (LHTEC), a partnership between Garrett Turbine Engine Company and the Allison Gas Turbine Division of General Motors. The AVCO/United contract was for $240 million and the LHTEC contract was for $263.95 million. The first use of this 1200-Shaft Horse Power (SHP) generic power plant was to be in the Army's new family of light weight helicopter (LHX), although other rationalized engines of which this was the first were to be used in future rotor and fixed wing Army aircraft. Although it was planned to be a modern engine, it was not to exceed the limits of demonstrated advanced engine technology. It was to feature lower fuel consumption, an improved power to weight ratio, and improved reliability and sustainability over current engines. It was anticipated that the Army would purchase some 10,000 of these engines by the end of the century for a total program cost of approximately $3.8 billion.

(U) This contract was innovative in several respects. Competition would be continued through development and procurement and the contractors were to sign up for unit price and support cost guarantees at the start of full scale production. The guarantees were made possible by telling the contractors what was needed but not how to do it, thus giving the contractors unusual flexibility.[29]

APACHE (AH-64 Advanced Attack Helicopter) (U)

(U) A variety of Army-wide developments occurred in the Apache program. An Apache training brigade was formed at Ft. Hood and plans were being executed for a programmed April 1986 First Unit Equipped (FUE) of an Apache Attack Helicopter Battalion (7/17) under the Total Package Unit Materiel Fielding (TP/UMF) concept. AMC formed an Apache Special Operations Center for the TP/UMF fielding on 9 January 1986. The turnover of the first Apache to FORSCOM was expected to take place in late February 1986.

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28 Ibid and Weapon Fact Sheet, CH-47D.

29 DEA Historical Report, FY85; DCS Procurement Historical Report, FY85; Pentagon Press Release, Memorandum for Correspondents, 19 July 1985.

(U) On 10 December 1985, Secretary Marsh approved the award of the FY86 Apache contracts. There were 309 Apaches on contract. As of 31 December 1985, 67 production aircraft had been turned over to the Army, and 48 of them had already been delivered to TRADOC. First Article Test V had been completed ahead of schedule on 18 December 1985 with all test points completed as planned.

(U) By the end of the calendar year training had been completed for 25 instructor pilots, 8 pilots, 5 maintenance test pilots, and others. All maintenance training devices had been shipped to Ft. Eustis and acceptance action was in process.[30]

Company Level Field Feeding Kitchens (CLFFK) (U)

(U) The 7th Infantry Division was fully supplied with CLFFKs and the 25th Infantry Division was given some CLFFKs for testing at the Pohakaloa Training Area in Hawaii. Natick Research and Development Center assistance was to be provided for this test.[31]

Bundle Delivery System for C-141 Aircraft (U)

(U) The stability of flight demonstration was performed at Wright-Patterson Air Force Base, with satisfactory results for the vamp-down flight mode. Test pattern drops conducted at Edwards Air Force Base were satisfactory for continuation of the program.[32]

Automated Equipment Pipeline Test (U)

(U) The Engineering Design Test model fabrication was completed and the testing was successful. The Operational and Organizational Plan was approved. It was anticipated that full scale engineering development would be waived because of the success of the program, and that it would proceed directly into production of hardware.[33]

Arctic Fuel Dispensing Equipment (U)

(U) Fabrication for the Development/Operational Test of both the forward area refueling system and of the fuel system supply point were completed and Arctic testing of the hardware was initiated.[34]

Assault Bridges (U)

(U) Prototype design of the heavy assault bridge was completed and funds were made available for three prototypes, with the first one completed to the 75 percent stage. Two of the prototype bridges were

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30 DCS for Development, Engineering and Acquisition AHR submission, FY85.
31 Ibid.
32 Ibid.
33 Ibid.
34 Ibid.

to be mounted on M1 chassis and the third on an M60 chassis.[35] The fabrication of three prototypes of the light assault bridge was begun, with completion of the first scheduled for the summer of 1986.[36]

Small Emplacement Excavator (U)

(U) The production contract was awarded and First Article Testing was initiated at Aberdeen Proving Ground.[37]

Night Vision Intensification Devices (U)

(U) In March 1985 CECOM, after close coordination between LTG Moore, the Under Secretary of the Army, and the staffs of various agencies, issued an innovative competition solicitation in which all known requirements for Night Vision Intensification Devices from FY86 through FY89 were consolidated into one package with an estimated value of approximately $800 million. This package was considered especially innovative because it only told the contractors what results were required, not how to do the job.

(U) This solicitation resulted in two five-year multi-year contracts, one for a joint venture between ITT and VARO for a total of $515,655,670 and one to Litton for $274,156,479. Although in most cases the order for individual items was split between the two contractors, in several cases the difference between the cost or quality offered by the contractors on a specific item was so great that the contract was split, 80 percent to one and 20 percent to the other, the greatest split possible according to the terms of the solicitation. In those instances AMC would follow up the award of these contracts by exercising its option to purchase the additional 20 percent of the initial solicitation from the contractor who obtained the 80 percent order of that item. Even though there would thus be only one instead of two manufacturers of certain items, both sources would be "producing tubes of the various technological types; thus a base for future competition will be maintained." In two instances the cost of a specific item from both contractors was considered to be unduly high. In the case of the Drivers Viewer, AN/VVS-2, in which the proposed cost was $1,740 more than the Government had recently paid for a similar item, AMC planned to resolicit. In the case of the Crew Served Weapon Sight, AN/TVS-5, in which the offer was 50 percent greater than a recent purchase of the same item, it was decided to accept it into the omnibus contract because it was for only 328 units at under $1.3 million and because the bulk of the units was for the Marine Corpe which was willing to pay this premium price.[38]

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35 Ibid.
36 Ibid.
37 Ibid.
38 DCS for Procurement Historical Report, FY85; Application Plan No. 1 for the Night Vision Image Intensification Device; Memorandum for Under Secretary of the Army from GEN Thompson, subj: Update on Omnibus Night Vision Acquisition.

Omnibus Night Vision Acquisition Split

Device	VARO/ITT %	Litton %
Night Vision Goggles, AN/PVS-5A&7	60	40
Aviators Night Vision Imaging System, AN/AVS-6	80	0
Individual Crew Served Weapon Sight, AN/PVS-4	0	80
Crew Served Weapon Sight, AN/TVS-5	80	0
Drivers Viewer, AN/VVS-2	0	0
Spare Tubes: MX-9644	60	40
MX-9644 with Magnifier	60	40
MX-9916	80	20
MX-10130	80	20
MX-10160	80	0

Source: Memorandum for Under Secretary of the Army from General Thompson, subj: Update on Omnibus Night Vision Acquisition.

Short Range Defense Command and Control (SHORAD C2) (U)

(U) An acquisition plan for an incremental approach to full scale production of SHORAD C2 was staffed and forwarded to HQDA; however, it was returned because of a 22 July 1985 ASARC decision to add a sensor to the system. At the end of the fiscal year Procurement was still working on adding the sensor to the acquisition plan.[39]

Multiple Launch Rocket System/Terminal Guidance Warhead (MLRS/TGW)(U)

(FOUO) A research and development contract was awarded on 29 November 1984 for a component demonstration substage of the validation phase for the TGW. This contract was a multinational development venture consisting of the United States, West Germany, England and France. The contract was awarded to a consortium of five companies: MDTT, Inc., an American firm with an integrated staff that would act as the management focal point for the joint venture, Martin Marietta Corporation of the United States, Thomson Brandt Armaments of France, Thorn EMI electronics of England, and Diehl GmBH and Company of West Germany. The United States supplied $38 million of the approximate $100 million contract, which contract also contained options for a system demonstration substage and for a maturation phase that would be worth approximately $251 million if implemented. Concurrent with this award, a letter contract was entered into with LTV Aerospace Division, the prime contractor for the MLR, for the integration of the TGW into

39 DCS for Procurement Historical Report, FY85.

the basic MLRS. The letter contract format had to be used since the details of the TGW could not be defined until after the selection of the warhead developer.[40]

(U) The MLRS was envisioned as a versatile weapons system that could fire a variety of missiles and warheads, including in addition to the TGW and conventional explosives, a Sense and Destroy Army (SADARM), binary chemical, anti-tank mines, and deep attack tactical missile.[41]

TOW (U)

(U) Much of the procurement action concerning the TOW missile was related to the Senate Armed Services Committee's concern over the Army's acquisition strategy in light of the Competition in Contracting Act of 1984. As a result, the FY86 plan which requested approval of FY86 purchases and options for FY87 to FY89 was forwarded with the recommendation that only the FY86 purchase be approved. That was approved by the Assistant Secretary of the Army (Research, Acquisition) on 15 August 1985, and plans were made to obtain a second source other than Hughes Aircraft to participate in part of the FY87 requirement.[42]

(U) Production of the TOW had been suspended in August 1984 because of poor workmanship and quality assurance problems at Hughes Aircraft Company and Missile Plant but it resumed in December 1984.[43]

Hellfire Missile System (U)

(U) The Hellfire was a laser-guided anti-tank missile that was to be used with the AH-64 Apache helicopter. Production had begun in 1983 and the initial fielding of the system to TRADOC was accomplished in FY85 in order to establish a training base. By the end of FY85 all maintenance and parts manuals, as well as Depot Work Orders, for the system had been published, and organic depot repair capabilities had been activated at Anniston Army Depot in July 1985.[44]

(U) In FY85 contracts were let for the 4th production year of the Hellfire Missile, with Martin Marietta receiving a firm fixed price contract for 4,104 all-up-rounds worth $135.6 million and Rockwell International receiving a firm fixed price contract for 1,676 rounds worth $71.6 million.[45]

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40 Ibid and Ltr, Manager of the MLRS Project to AMC, subj: Program Management Control System (PMCS) Monthly Status Report for the Multiple Launch Rocket System (MLRS) Terminal Guidance Warhead (TGW) as of 3 Jan 86.

41 FY85 input, DCSfor Supply, Maintenance and Transportation.

42 DCS for Procurement Historical Report, FY85.

43 DCS for Supply, Maintenance and Transportation Historical input, FY85.

44 SMT AHR input, FY85.

45 DCM for Procurement Historical Report, FY85.

Patriot Missile (U)

(U) In November 1984 Raytheon Corporation, the prime contractor for the Patriot, was awarded a $113 million contract for Research and Development and Operational and Maintenance Army efforts and Engineering Services in support of the production of the Patriot. In January 1986 it also received a fixed price incentive contract for $697 million for production buy 6. In addition, an Initial Production Facilities (IPF) contract for $70.8 million was awarded to increase the monthly capability to 80 missiles, 10 launchers, 1.25 fire units, and required spare parts as well as repair and return requirements.[46]

(U) A $22.8 million contract for the Patriot Anti-Tactical Missile (ATM) program was awarded in June 1985, including software development of the Patriot ATM capability to provide self-defense for the missile batteries.[47]

(U) Based upon a request from Hercules Corporation, the Patriot Project Office submitted a plan for competitive procurement of the rocket motor to the AMC Staff and Mr. James B. Hall, Deputy Assistant Secretary of the Army (Acquisition) in August 1985. Mr. Hall agreed not to pursue the competitive purchase of the rocket motor since the projected savings of $6 to $10 million were not worth the risk; however, MICOM did plan to break out the rocket engine among the existing contractors (Raytheon, Thiokol, and Martin Marietta) starting in FY87.[48]

(U) On 5 September 1985 the Under Secretary of the Army requested that a briefing be prepared to compare the benefits of multi-year procurement versus breakout. The resulting study showed that multi-year procurement offered greater savings.[49]

(U) FY85 saw the first deployment of a Patriot battalion in Europe. The arrival of troops and equipment in Germany commenced in January 1985 and on 5 March 1985 the first unit equipped date (FUED) was achieved by the first European Patriot Battalion, the 4/3 Air Defense Artillery at Giessen, Germany.[50]

(U) On 28 August 1985 the US, Germany, and the Netherlands agreed to a weapons system partnership, under the auspices of the NATO Supply and Maintenance Organization (NAMSO), for coordinated logistic support of the Patriot, including selected secondary and major end item repair,

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46 Ibid.

47 Ibid.

48 Ibid; Ltr, Deputy Assistant Secretary of the Army (Acquisition) to Commander, AMC, subj: Second Sourcing of Patriot Rocket Motors, 9 Aug 85; Ltr, DCS Procurement to Commander, MICOM, subj: As above, 4 Sep 85.

49 DCS for Procurement Historical Report, FY85.

50 DCS for Supply, Maintenance and Transportation Historical Report, FY85 and Facts on File Weapon Sheet, Patriot, July 1986.

missile surveillance, and recertification. A common Patriot missile repair and depot maintenance facility was to be operational by CY89. A Logistic Support Arrangement (LSA) to define the mission to be given to NAMSO and to specify the logistic services to be provided to the partnership was being staffed and was expected to be approved at the December 1985 NAMSO Board of Directors meeting.[51]

SGT York (U)

(U) FY85 saw the elimination of a major weapon modernization with the cancelling of the SGT York, previously known as the Division Air Defense (DIVAD) gun system. An initial production contract for the SGT York in April 1981 had quantity options of 50, 96, and 117 fire units. The results of the limited test, conducted in August 1984, had not supported commitment to Option III and additional comprehensive testing was required by the Office of the Secretary of Defense and carried out from November 1984 to June 1985. These tests included the Initial Product Test, Follow-On Evaluation, and Limited Tracking and Evaluation. The results of the test were provided to the Office of the Secretary of Defense which announced on 27 August 1985 that the SGT York program was cancelled. The Army then began to evaluate other air defense options.[52]

M1A1 Abrams Tank (U)

(U) Plans were developed to forward deploy the modified M1A1 Abrams Tank to Europe. The planned distribution of the M1A1 was changed from 1,875 in Europe and 1,514 in CONUS to 3,343 in Europe and 857 in CONUS, with M1A1 production increased from 7,058 to 7,467. The fielding would be done in accord with the TP/UMF policies starting in the third quarter of FY86, with AMC acting as the executive agent for the forward fielding. The fielding site was to be Vilseck with Boblingen as a candidate second site.[53]

155mm Howitzer, M109A2/A3 (U)

(U) The M109A2 was the current production model of the 155mm howitzer, while the M109A3 was a physically similar and operationally identical variant. The Howitzer Extended Life Program (HELP) was initiated in early 1981 to improve the readiness and survivability of the howitzer. The Howitzer Improvement Program (HIP), designed to improve the armament and fire control of the howitzer, was approved by the VCSA in November 1984.[54] The VCSA directed that the HELP and HIP programs be merged and that they be applied to 1,700 M109A2/A3s. Operational Testing for HELP was completed in August 1985, and Product

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51 DCS for Supply, Maintenance and Transportation Historical Report, FY85.

52 Ibid. There had been an extensive public debate on the SGT York prior to the decision to cancel it.

53 Ibid.

54 For more on HELP/HIP, see the FY84 AHR.

Improvement Testing for HELP was scheduled to be completed in January 1986. A special In-Process Review for both programs was scheduled for the third quarter of FY86 to make production decisions on long lead items and to attempt to incorporate as many HIP items as possible into HELP. Production of the kits for the HELP program was scheduled to start in the fourth quarter of FY86 with delivery to begin in the first quarter of FY88. IOC for HELP was scheduled for the second quarter of FY89.[55]

Improved TOW Vehicles (ITV) (U)

(U) The $27 million FY85 buy of ITVs for use in the National Guard, added 125 ITVs to the Army and National Guard inventory. More significant was a product improvement program in progress in FY85 to modify the ITV so that they could fire the TOW-2 missile. This program was scheduled to be completed in FY86, with the modified ITVs being designated the M901A1. The ITV fleet was also selected for survivability enhancement. These enhancements had not yet been selected but those proposals under consideration included power, armored fuel tanks, spall liners, and bolt-on armor.[56]

Field Artillery Ammunition Support Vehicle (FAASV) (U)

(U) The FAASV were armored tracked vehicles designed to provide ammunition resupply for the 155mm and the 8-inch howitzers. They had superior ballistic protection, ammunition handling equipment, mobility, and vehicle commonality (the FAASV was based on an M109 chassis) than the current M548 which they were to replace on a one-for-one basis. The 155mm resupply vehicle, the M992, was fielded to TRADOC in September 1985, and the projected First Unit Equipped Dates for FORSCOM and USAREUR were November 1985 and March 1986, respectively. There were no current plans to field the XM1050 model for 8-inch howitzer resupply due to budgetary constraints. An In-Process Review to type classify both versions as standard was planned for December 1985.[57]

Hawk (U)

(U) Plans were being made to transition the Hawk Missile System to the Army National Guard. The PM prepared procedures to utilize TP/UMF to field the system to the New Mexico National Guard and the Materiel Transfer Plan was expected to be published in January 1986.[58]

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55 DCS for Supply, Maintenance and Transportation Historical Report, FY85.
56 Ibid.
57 Ibid and AMC Weapons Fact Sheet database.
58 SMT AHR input, FY85.

Roland (U)

(U) The New Mexico Air National Guard declared that Battery A, 5th Battalion, 200th Air Defense Artillery, had achieved initial operational capability with the Roland on 1 March 1985.[59]

Dragon (U)

(U) The Dragon was a 1970s era anti-tank weapon still in use in the Army, although no longer in production. (For the planned replacement for the Dragon see the Advanced Anti-tank Weapons - Medium discussed above.) FY85 saw the completion in September 1985 of the change out of faulty ignitor motors for 19,000. Consideration was also being given to the Army's acquisition of 641 Iranian owned practice rounds. Ownership of these rounds would enable units without facilities that enabled them to safely fire high explosive, anti-tank rounds to continue practice firings of the Dragon through FY92. FY85 also saw the approval of funds for the improvement of the Dragon warhead.[60]

Lance Missile System (U)

(U) On 9 July 1985 the Under Secretary of the Army was briefed on the Service Life Extension Program (SLEP) for the Lance Missile System. He approved the minimum cost method of extending the life of the Lance into the mid-1990s. This primarily involved the modification of the electronic guidance system in order to improve the weapon's readiness rate. The SLEP modifications were started in FY85 and were projected to continue through FY89.[61]

Chaparral Missile System (U)

(U) Fielding of the Chaparral Missile System to the New Mexico National Guard started in the first quarter of FY85 with the shipment of 12 fire units. Red River Army Depot was designated to be the staging site for the hand-off of the system in future fieldings to the New Mexico National Guard.[62]

Nike-Hercules Phase Out (U)

(U) The phase out of the Nike-Hercules tactical missile system in USAREUR in December 1984 resulted in the generation of a large quantity of excess Nike-Hercules materiel. Much of this was redistributed or sold. Equipment worth over $270 million, at standard Army prices, was sold to NATO and Far Eastern allies under the Foreign Military Sales program for $43 million. This not only recouped money but also

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59 Ibid. For more on the checkered history of the Roland, see the FY84 AHR.

60 SMT AHR input, FY85.

61 Ibid.

62 Ibid.

resulted in a cost avoidance of another $3 million worth of transportation and demilitarization costs. Additional Nike-Hercules equipment worth more than $48 million was transferred to the Air Force and Navy to be used in testing new weapons. As a result, when the FY85 phase out in USAREUR and the 1974-77 phase out in CONUS were taken together, over 80 percent of the Nike-Hercules assets were redistributed rather than eliminated through the property disposal route.[63]

UH60A Black Hawk Helicopter (U)

(U) The Black Hawk fleet was grounded on 19 April 1965 following accidents at Fort Bragg, North Carolina and Fort Rucker, Alabama. The Fort Bragg accident was believed to have been caused by the absence of a bolt in the flight controls, and an inspection of the fleet found no other aircraft in which this was a problem. The Fort Rucker accident, however, had broader implications for the Black Hawk fleet. It was caused by the failure of the main rotor blade spindle, which resulted in a blade being thrown from the aircraft. This turned out to be a systematic problem and was corrected by the development of a load-sharing tie rod to be installed in the spindle. It was expected that the retrofit of the entire Black Hawk fleet would be completed by November 1985.[64]

Army Helicopter Improvement Program (AHIP) (U)

(U) Development and operational testing of the OH-58D (AHIP) helicopter was completed in FY85, as were ASARC and DSARC reviews ending with DSARC III on 26 September 1985. The results were inconclusive because the OH-58D was unable to clearly demonstrate that it had operational superiority in supporting the attack and air cavalry roles in Operational Test II. As a result, the initial production aircraft were to be fielded only for the field artillery observer role. The decision as to further use of the aircraft was to depend upon additional tests that were scheduled to begin in January 1986 and be followed by a DSARC review in the summer of FY87. These tests were to be similar in nature to Operational Test II and were to involve force-on-force trials that would employ a mix of attack and scout aircraft operating in support of ground forces engaged in both offensive and defense scenarios.[65]

OV-1D/Side Looking Airborne Radar (SLAR) Transfer to Europe (U)

(U) Planning was undertaken in FY85 for the proposed mid-1986 transfer of the OV-1D (Mohawk) SLAR aircraft to Europe.[66]

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63 Ibid.
64 Ibid.
65 Ibid.
66 Ibid.

Fielding of the RC-12D Improved Guardrail V (IGRV) (U)

(U) Guardrail V is a combined airborne and ground system designed to intercept and locate enemy communications emittors. Guardrail V was mounted in a modified U-21 utility aircraft while the RC-12D Improved Guardrail V was carried in a modified C-12 utility aircraft. Two of the RC-12D Improved Guardrail V systems were sent to Europe in FY85, with one becoming operational that year and the other one expected to become operational in the first quarter of FY86.[67]

EH-60 Quickfix IIB Electronic Countermeasure System (Heliborne) (U)

(U) The Quickfix series consisted of electronic warfare systems for various helicopters that would be used to intercept and jam enemy radio communications. They were to be organic to divisions, separate brigades, and armored cavalry regiments. The contract for the development of the Quickfix IIB system was awarded to TRACOR Industries, Austin, Texas. Program production reviews were held during FY85 at facilities in Austin and Laredo, Texas. The last facility involved, one in Mojave, California, was to have its review in the second quarter of FY86. The scheduled fielding date for the system was FY88.[68]

CH-47 Modernization Program (U)

(U) The CH-47 medium lift aircraft was in the midst of a program to upgrade the aircraft by converting its A, B, and C models to the D model. FY85 was the fifth year of production for that program and it was marked by the signing of a 5-year contract for the conversion program. The contract was for $1.171 billion and it resulted in a projected savings based upon the anticipated cost of single year programs of $123.1 million. By the end of FY85 the Army had received a total of 71 CH-47D aircraft under previous years contracts. In addition, following negotiations between the United States and Italy, the US accepted 11 CH-47C aircraft built under license by Agusta of Italy for Iran.[69]

High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) (U)

(U) Problems with the distribution of the HMMWV arose in CY85 because the manufacturer, AM General, had decided to make more of the cargo versions and less of the TOW and armament version than had been specified in the contract. As a result, it was impossible to deploy the HMMWV in the required unit sets. Another problem compounding the situation was that the contractor was having engineering configuration problems with the Group II HMMWV. As a result the entire distribution plan for the HMMWV had to be revised. It also resulted in negotiations

67 Ibid. For information on the Guardrail, see Army 1985-86 Green Book (Oct 85).

68 SMT AHR input,FY85 and Army 1985-86 Green Book (Oct 85).

69 SMT AHR input, FY85.

between TACOM and AM General over contract production and delivery in which the CG, TACOM and the president of AM General were the main negotiators.[70]

(U) The Group I HMMWVs were conditionally released, but only after delays resulting from a transportability issue. The vehicles did pass transportability tests in rail cars in accord with military standards, but only by using nonstandard tie-down procedures. That was necessary because the standard tie-down procedures were designed for standard heavy vehicles traditionally used by the military and not for the high technology unique design of the HMMWV. As a result, action was taken to review the relationship between military transportability procedures and high technology equipment development.[71]

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70 Ibid.
71 Ibid.

CHAPTER III

MATERIEL ACQUISITION (U)

Organization (U)

(U) In FY85 the final plans and preparations were made to implement the decisions reached during the Laboratory Effectiveness Improvement Program (LEIP) studies in FY84.[1] The most drastic change was activation of Laboratory Command (LABCOM) on 1 October 1985, the first day of FY86. A new major subordinate command (MSC) of AMC, LABCOM

> (FOUO) Integrates the formerly independent laboratories and offices into a single cohesive command focused on the tech base and with the specific mission of transitioning advanced technology into the commodity commands' product lines. The effect of these initiatives [sic] will be a reduction of the number of laboratories and offices directly reporting to HQ, AMC as well as a strengthening of the day-to-day management of the laboratories and their technical programs. One of LABCOM's key roles is to concentrate on generic technologies, those advanced methodological and component developments with potential for application in many different commodity areas. Another is acting as the AMC focal point for the management of programs and activities that lead to or maintain the survivability and effectiveness of Army materiel in the battlefield environment. The corporate laboratories will provide independent technical advice and R&D [Research and Development] assessments.[2]

(U) LABCOM was formed by converting the headquarters of the Electronics Research and Development Command (ERADCOM) at Adelphi, Maryland, in place, into LABCOM. The Commander of LABCOM, the first of whom was Major General James C. Cercy, was responsible for managing the corporate laboratories. After the decision had been made to establish LABCOM, it was also decided to give the LABCOM Commander a second hat as the Deputy Chief of Staff for Technology Planning and Management (DCSTPM). As such he was made responsible for overall management of the AMC-wide technology base program, including planning and allocating tech base financial resources (6.1 funds for basic research, 6.2 funds for exploratory application of concepts toward military equipment, and 6.3a funds for non-system advanced development of generic equipment not yet a formal requirements program), review and analysis of

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[1] For background on the LEIP, see AMC's AHR for FY84.

[2] State of the US Army Materiel Command, 1985.

the tech base, and the transition of advanced technology into operational use. This structure is "often seen in the private sector; namely, establish the dual hat position of Director of Corporate Laboratories and Vice President for Corporate Research and Technology." As DCS for Technology Planning and Management and as LABCOM Commander, the incumbent had offices at HQ, AMC, and Adelphi, Maryland, although "the organizational structure and the personnel required to execute the DCSTPM responsibilities [were] essentially in place at HQ LABCOM, Adelphi, MD."[3]

(U) Incorporated into AMC as subordinate organizations were the Ballistic Research Laboratory (BRL) at Aberdeen Proving Ground (APG), Maryland; the Human Engineering Laboratory (HEL), also at APG; Harry Diamond Laboratories at Adelphi; the Materials Technology Laboratory (MTL), formerly known as Army Materials and Mechanics Research Center (AMMRC) at Watertown, Massachusetts; the Electronic Technology and Devices Laboratory (ETDL) at Fort Monmouth, New Jersey; the Vulnerability Assessment Laboratory, formerly the Office of Missile Electronic Warfare (OMEW) at White Sands Missile Range, New Mexico; and the Army Research Office (ARO) at Research Triangle Park, North Carolina.[4]

(U) Also stemming from the organization studies conducted as part of the LEIP was the planned establishment of full spectrum Research, Development, and Engineering (RDE) Centers at the Commodity Commands. These RDE Centers were to be created, effective 1 October 1985, from existing laboratories at the Commodity Commands (which were no longer to be known as laboratories, a term now reserved for the LABCOM research facilities) and from other RDE assets of the commands. The roles of the RDE Centers were to include:

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[3] Memorandum, Chief of Staff to Deputy Chiefs of Staff, Subj: US Army Laboratory Command (LABCOM), 3 Feb 86 and Memorandum, CG, AMC to all AMC Headquarters Personnel, Subj: US Army Laboratory Command (LABCOM)/Deputy Chief of Staff for Technology Planning and Management (DCSTPM). One result of the reorganization will be that the AMC AHR in future years will not provide principal coverage of activities of the DCS for Technology Planning and Management. Instead, its activities will be encompassed in the LABCOM AHR beginning with FY86.

[4] DCS for Technology Planning and Management Historical Report, FY85.

* analyzing threats;
* responding to user concerns;
* maintaining awareness of technological and system opportunities arising out of academic, industrial, and other US and foreign government activities;
* analyzing the marketplace to determine its ability to meet user needs;
* identifying mature commodity-specific technologies amenable to four-year new equipment development at acceptable risk levels;
* providing industry with independent research and development (IR&D) and market guidance;
* managing the timely availability of essential technologies associated with emerging systems;
* integrating maturing technologies into testable concept prototypes;
* planning the complete concept exploration phase of new systems;
* demonstrating feasibility of systems in hands of field troops, the final users;
* providing liaison with PMs and supporting them in such areas as configuration management and engineering documentation, producibility and production engineering, and technical problem solving;
* conducting engineering development on the first buy for systems not managed by a PM;
* supporting the development of product and block improvements;
* providing life cycle engineering support for fielded systems.[5]

Proposed DE Centers

MSC	RDE Center
AMCCOM	Armament RDE Center (ARDEC) Close Combat Armaments Fire Support Armaments
	Chemical RDE Center (CRDEC)

[5] Ibid.

AVSCOM	Aviation RDE Center (AVRDEC) Avionics Research & Development Activity Aviation Research & Developemnt Activity Aviation Engineering Flight Activity
CECOM	Communications Electronics RDE Center Electronic Warfare/Reconnaissance, Surveillance and Target Acquisition Communications/ADP Night Vision and Electro-optics Signals Warfare
MICOM	Missile RDE Center (MRDEC)
TACOM	Tank-Automotive RDE Center (T-ARDEC)
TROSCOM	Belvoir RDE CENTER (BRDEC) Natick RDE Center (NRDEC)

Source: DCS for Technology Planning and Management, Historical Report, FY85.

(U) Another activity stemming from the LEIP was peer review of laboratories by the Army Science Board. Two such reviews were conducted in FY84: a favorable review of AVSCOM's Avionics Research and Development Activity (AVRADA) and a critical review of TACOM's R&D Center.[6] These reports were forwarded to AMC by the Assistant Secretary of the Army (Research, Development, Acquisition) with a request that AMC comment not only on the reports but also "on the process that has produced them."[7] Further ASB peer reviews were conducted in FY85. These included the Signals Warfare Laboratory, the Electronic Warfare Laboratory, the Atmospheric Sciences Laboratory, and AVSCOM's Research and Technologies Laboratory.[8] All received generally favorable reviews.

6 See the FY84 AHR for further details regarding both reviews.

7 Ltr, Assistant Secretary of the Army to CG, AMC, Subj: [Army Science Board Reviews], 8 Nov 84.

8 Army Science Board, Executive Summary Report Army Science Board Reviews of Signals Warfare Laboratory, Electronic Warfare Laboratory, Atmospheric Sciences Laboratory, June 1985; Army Science Board, Report of Army Science Board Ad Hoc Subgroup on Electronic Warfare Laboratory Effectiveness Review, June 1985;

(U) In response to the request from the Assistant Secretary of the Army that AMC comment to the peer review process, AMC stated that the "ASB peer review process is important" and provided "valuable insights."[9]

(U) Going further, however, AMC established a task force headed by the Technical Director of the Natick Research and Development Center to review the reports' findings and recommend actions that AMC should take in response to the findings. After reviewing the reports and meeting with the chairmen of the two ASB review panels and with the management and staffs of the affected laboratories and MSC, the AMC task force agreed in general with the findings. Relative to the critical findings concerning the TACOM R&D Center, the task force recommended that establishment of the full spectrum RD&E Center in TACOM would solve most of the existing weaknesses.

(U) At the urging of the CG that any necessary corrective measures be undertaken as soon as possible, a number of further steps were taken.

(U) One of these was another but more detailed study of the need for a laboratory in the tank and automotive community and what should be done, if such a need existed, to make it a viable and productive laboratory. This resulted in a detailed plan by TACOM for its RDE Center. The plan was approved in the summer of 1985 and became operational on 1 October 1985.

(U) In response to the criticism that there was a weakness in the transition of equipment from development at AVRADA to readiness at CECOM, AMC directed that by July 1985 the responsibility for readiness of aviation-unique electronics items would be transferred from CECOM to AVSCOM.

(U) Action was also taken on some comments that appeared to reflect systemic problems in the R&D community rather than a problem of any one specific laboratory. The first problem concerned the

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Army Science Board, Report of Army Science Board Ad Hoc Subgroup on Atmospheric Sciences Laboratory Effectiveness Review, June 1985; Army Science Board Panel Review of US Army Signals Warfare Laboratory Final Report, June 1985; Report of the Army Science Board Independent Review of the US Army Research and Technology Laboratories, June 1985.

9 Ltr, CG AMC to Assistant Secretary of the Army (RD&A), Subj: [ASB Review], 14 Feb 85.

difficulty of hiring and retaining scientific and engineering personnel. Not entirely remediable within the Command, AMC's response was a study by the DCS for Technology Planning and Management that led to a number of CG-approved personnel actions. It was recognized that an attack on the broader problem might require action by other agencies, such as the Office of Personnel Management, and Congress.

(U) The other systemic problems related to the R&D procurement system, notably the administrative burden placed on technical personnel and the need to reduce procurement lead time. The Deputy for Management and Analysis was directed to study these problems and recommend solutions, a process that took until the end of the first quarter of FY86 to complete. Finally, the DCS for Technology Planning and Management was directed to monitor all the actions resulting from the Army Science Board Peer Review Process and the AMC Task Force recommendations and to develop an implementation plan for them.

Independent Research and Development (IR&D) (U)

(U) Under the IR&D program companies are allowed to charge the Government, as overhead costs on certain contracts the cost of running an independent company-controlled research and development program. Legitimate aims of such programs would be increasing basic knowledge, exploiting scientific discoveries, improving existing products and systems or creating new ones. If the company received more than $4.4 million in a given year it was required to submit annual technical plans and negotiate with the Government to establish a ceiling for the amount of such costs that it could recover the following year. In FY84, doubts about the benefits of this program for the Army surfaced, and led in FY85 to an effort to exert greater Army control over the IR&D program. At the direction of the VCSA, the Army changed its policy on negotiating cost recovery ceilings with contractors by adding a "factor based upon the degree to which the contractor's IR&D program focused on Army priorities." During FY85 this was used in negotiations to reward Army contractors whose IR&D programs were of great interest to the Army. The Navy and Air Force, however, refused to join in this approach for FY86, arguing instead that the current system of evaluating IR&D programs was adequately orienting them toward DOD priorities and that the Army approach would unnecessarily reduce the independence of the IR&D programs. Moreover, the Undersecretary of Defense for Research and Engineering eventually ordered the Army to drop this approach and instead join in the negotiation policies jointly established by all three Services. As a result, AMC planned in the future to try an

alternate approach of intensifying industry information programs to insure that contractors were made aware of Army priorities and needs.[10]

Technology Integration Office (U)

(U) The Technology Integration Office (TIO) had been established originally as the New Thrusts Initiative (NTI) Office with the mission of accelerating the integration of certain high technology items into the Army.[11] In FY85 the Technology Integration Office was developed as a follow-on and expansion of the New Thrusts Initiative Office with the function of shortening the acquisition cycle for all developmental products. Under this concept of operation, new items would remain in the tech base until matured, and would then be ready for a feasibility demonstration using regular Forces Command troop units. The TIO would be responsible for identifying the technologies and channeling them into feasibility demonstrations. The feasibility demonstration would take the place of the familiar but slower Development Test I and Operational Test I (DT/OT I) and skip the product forward into full-scale development as rapidly as practicable. A two-year transition from exploratory development to engineering development (i.e. 6.2 funding to 6.4 funding) would be practicable by this approach.[12]

Development, Engineering and Acquisition (DEA) (U)

The RDTE Execution Office (U)

(U) The RDTE Execution Office managed DEA's responsibilities for expenditure of Research, Development, Test, and Evaluation (RDTE) funds. The following chart displays the RDTE funds released, obligated, and disbursed by the MSCs in FY85.

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[10] For the concern about the IR&D program in FY84, see AMC AHR for FY84. For the IR&D program itself see AR 70-74, Research, Development and Acquisition: Independent Research and Development, 3 Dec 84. For the actions taken in FY85, see DCS for Technology Planning and Management Annual Historical Report submission for FY85.

[11] For the NTI program in FY84, see AMC AHR for FY84.

[12] Deputy Chief of Staff for Technology Planning and Management FY85 AHR submission. The TIO functions described herein were rolled into the Laboratory Command's Advanced Systems Concept Office (ASCO) on creation of LABCOM at the beginning of FY86.

RDTE FUNDS, FY85

Command	Release Program ($M)	% Obligated	% Disbursed
AMCCOM	557.9	94.2	47
AVSCOM	433.7	93.3	41
TROSCOM	144.4	98.7	68
ERADCOM	479.9	96.4	46
CECOM	360.1	99.1	49
MICOM	388.1	86.7	43
TACOM	227.3	81.8	29
TECOM	403.0	99.6	75
Other AMC	536.7	90.7	54
Total AMC	3,531.1	93.5	50

Source: DEA Historical Report, FY85.

(U) The 93.5 percent obligation rate for AMC exceeded the DA goal of a 90 percent obligation rate for RDTE funds, and AMC's 50 percent disbursement rate met the DA goal of 50 percent in this area. Most MSCs had met the 90 percent obligation goal, but only a few had disbursed at the 50 percent target rate; the much higher disbursement rates for TECOM and TROSCOM brought the disbursement average up to DA goals for the entire AMC.

(U) The five-year projected RDTE Program showed the customary increases in the outyears, although the more recent projection of September 1985 indicated a somewhat flatter climb than the earlier, May projection:

FY87-91 RDTE Program.

Project Listing	FY87	FY88	FY89	FY90	FY91
May 85	4,610,285	5,130,769	5,170,469	5,557,575	6,708,682
Sep 85	4,886,912	5,309,658	5,227,396	5,537,842	6,238,467

Source: DEA Historical Report, FY85

Acquisition Assessment and Policy Division (U)

(U) Most of the major initiatives to reform the acquisition system fell under the purview of the Acquisition Assessment and Policy Division, although in most instances there was considerable direct involvement by high levels of AMC and DOD management as well.[13]

(U) AMC Streamlined Acquisition Process. One of the most significant of these innovations was the program started by General Thompson the previous year to shorten the acquisition cycle. This program, known as the AMC Streamlined Acquisition Process (ASAP), had the goal of reducing the acquisition cycle from program initiation to the signing of the production contract to four years for developmental items and two years for product improvements and nondevelopmental items (NDI) taken by the Army from commercial sources or from other military services, including foreign ones.

(U) In a message to subordinate commanders in July 1985, HQ, AMC explained the current status and basic direction of the ASAP program. The program was a restructuring of the acquisition cycle that eliminated much of the concept exploration and demonstration-validation activities, as well as one formal milestone review. To be emphasized for new programs were mature, low-risk technologies and demonstration of concepts in the hands of troops prior to entry into full-scale development. The phases of the the "streamlined" acquisition model were:

(a) Tech Base/Requirements. This phase called for a focus on mission area deficiencies from the tech base perspective, coordinating tech base efforts among labs, IR&D, foreign research, and RDE Centers, maturing promising technology and components, and identifying candidate projects for proof of principle. The laboratories were to have the lead in material development during this phase, and the amorphous nature of the process of matching tech base gains to product requirements made time constraints or goals inapplicable.

(b) Proof of Principle. This phase, corresponding with the former advanced development phase, was to be led by the Research, Development and Engineering (RDE) Centers and was to take from one to two years. It included the development of brassboard prototypes and surrogates, component proveout, and troop demonstrations. The phase was designed to be applicable to both system and non-system

[13] For the DCS's involvement with specific weapon systems other than those discussed below, see the Force Modernization chapter.

concept demonstration, and removal of restrictions on use of 6.3A and 6.3B funding was being sought for later years even as developers were being urged to cast their justifications for 6.3 funding in "vanilla" terms to achieve maximum flexibility.

(c) Development/Production Prove-Out. This phase, to be led by PMs and RDE centers, was to take no more than four years. It involved full-scale development of the item, including hard-tooled prototypes and an initial production facility, and attention to producibility engineering.

(d) Production and Deployment. This phase was to be led by the PMs and MSCs and was to take from 1.5 to 2.5 years through a low rate initial production (LRIP) to an economic rate production and product fielding.

(U) In placing the streamlined acquisition model on a routine rather than an exception basis, the July message added the requirement of approval from the DCG for Research, Development, and Acquisition if a program required "advanced development" or a specific "6.3B" effort, and the approval of the Commanding General for new products structured other than by the streamlined model.[14]

(U) AMC's second message on shortening the acquisition process was sent to the commanders at the end of August, and addressed further specifics of implementation. It directed the commanders to prepare by September a list of all development programs which had been started or amended "during General Thompson's watch"— a streamlined model "candidate list" sorted by those which were, or would be, pursued fully in accord with the new streamlined policy, those that required only minor deviations from the model, those that were product improvement or NDI programs and would be following the streamline model, and finally those developmental and PIP/NDI programs which could not be tailored to fit together with a statement of the reasons why not.

(U) Plans called for the list to be updated quarterly following initial production in September 1985. The updates were to provide progress or status annotation for use in "real world implementation activities" and would provide a basis for responding to inquiries from senior AMC/Army leadership.

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[14] Msg (U), CDRUSAMC to AIGs 11604, 12296, 7546, Subj: Shortening the Acquisition Process—Message No. 1, 29 Jul 85.

(U) A second element of the quarterly report called for from the commanders related to a 15 May 1985 directive that applicability of certain streamlining steps taken by AMC and TRADOC in the chemical area be explored and reported for non-major systems. The chemical materiel initiatives were developed during FY84 and included such elements as generic requirements documents and expedited testing and evaluation with close coordination with a standing TRADOC board.[15] What was to be further required was inclusion of this reporting requirement in the same document with the candidate list. A single streamlining advocate, Mr. Roy D. Green, DEA's Assistant Deputy Chief of Staff for Program Management, was given overwatch responsibility for the initiatives, his "action arm" being the Acquisition Assessment and Policy Division.[16]

(U) NDI/PIP. As part of the process of shortening the acquisition cycle, AMC was continuing to concentrate, particularly in the "low end of the acquisition spectrum," on non-developmental item (NDI) and product improvement proposals (PIP) whenever possible. Integration of such systems, if required to meet development needs, would be kept in low-risk areas, and future growth protential would be looked to through application of later-maturing technology by the Preplanned Product Improvement (P^3I) approach.[17]

(FOUO) Non-developmental Items. A Functional Process Assessment (FPA) of the the NDI acquisition program was completed in March 1985. This study validated the concept of completing an NDI acquisition within two years, but warned of increased risks if the commercial items were to be modified or if a number of commercial items were being assembled into a finished product. Industry representatives were also consulted on the NDI process to elicit suggestions for improvements. These suggestions, together with 44 recommendations coming out of the 44 improvements recommended through the FPA were being studied so as to revise policies and procedures to further streamline the process. Key among the elements critical to

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[15] For more background on these initiatives, see the AMC AHR for FY84.
[16] Msg (U), DCRUSAMC to AIGs 11604, 12296, 7546, Subj: Shortening the Acquisition Process--Message No. 2, 30 Aug 85.
[17] State of the US Army Materiel Command, 1985, p. 13.

successful NDI acquisitions were up front planning, the availability of funds, and the inclusion of Integrated Logistics Support in the source selection criteria.[18]

(FOUO) Use of the NDI process in FY85, spurred in part by updating of AMC Pam 70-7 to further establish the preference toward NDI as an acquisition strategy, included purchase of generator sets for Corps and Division headquarters to be used as part of power distribution systems built by Tooele Army Depot, the generators being mounted by Tobyhanna Army Depot in trailer configurations. A commercial tank decoy was located for purchase and use by USAREUR in FY86. Other significant NDI programs involved the lightweight 105mm howitzer, the 9mm pistol, and the multi-purpose bayonet.[19]

(U) The 9mm pistol was purchased as the result of a search for a new sidearm to replace the .45 caliber automatic handgun as the standard sidearm. Following an evaluation of eight candidates submitted by commercial firms, the 9mm Beretta, Model 92SB-F, was selected in January 1985 as the new sidearm. A five-year fixed price contract for 315,930 weapons was awarded on 10 April. The choice became a hotly contested issue. The General Accounting Office (GAO) received and dismissed challenges to the contract by Heckler Koch, Smith and Wesson, and Maremont Corp., but later, in October 1985, announced that it was opening an investigation into charges of impropriety in the selection that had been raised by Congressman Jack Brooks (D-Tex). In addition, litigation over the contract award was still pending with Smith and Wesson and Maremont Corporation at the end of the year.[20]

(U) In addition, the Beretta model ran into difficulties with the First Article Test (FAT), being rejected because the weapon did not use NATO ammunition, did not meet the accuracy requirement, and had 12 components that failed to meet their dimensional requirements. Beretta stated that its quality assurance procedures would be revised, and resubmission of the FAT was scheduled for 7 January 1985.[21]

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[18] Ibid, p. 15. DCS for Supply, Maintenance and Transportation AHR submission FY85.

[19] State of the US Army Material Command, 1985, pp. 15-16. AMCDE FY85 AHR submission.

[20] DCS for Development, Engineering, and Acquisition, FY85 AHR submission.

[21] Ibid.

(U) Two types of ammunition for the pistol were evaluated and adapted. The first was the US Ball M882 cartridge, an adaptation of the basic commercial 9mm cartridge, and the second was a high pressure round to be used for weapon and test barrel proofing. Also evaluated and type classified were a hip holster and a magazine ammunition pocket. The shoulder holster used with the .45 caliber sidearm was to be retained and modified for the new weapon by soaking and stretching its pistol hold down strap to fit the Beretta.[22]

(U) The need for a multi-purpose bayonet had been identified in a briefing to the Undersecretary of the Army on 29 April 1985. Following a market survey that determined that there were off-the-shelf items that would satisfy this requirement, a Letter Requirement was approved on 9 December 1985 that identified the requirements of the Bayonet System, those being a bayonet suitable for close combat defense as well as various field tasks, a scabbard, and a quick release/attachment device. The go-ahead in process review (IPR) was scheduled for February 1986.[23]

(U) The L-119 was a towed British 105mm light howitzer that was being procured to equip the new American Light Divisions. In June 1985, 14 of these were received in the United States for testing, and by August their Operational Test II had been completed successfully. The new howitzer was to use US 105mm ammunition and be towed by the HMMWV, uses proven during Operational Test II.[24]

(FOUO) Other NDI use of foreign military equipment for the light division included the acquisition of Canadian wheeled armored vehicles, German backhoes and motorcycles, and the French Lohr vehicle.[25]

(FOUO) The NDI process was also used to evaluate foreign military equipment for purposes other than equipping the light division. Several Israeli countermine systems were being procured and evaluated, including the Cleared Lane Marking System (CLMS), mine clearing plows for the M60 and M1 tanks, and the portable mine clearing line charge (POMINS). Significant use was being made of foreign equipment in the chemical defense arena. The United States was using or considering the use of German markers for contaminated areas, gas

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22 Ibid.
23 Ibid.
24 Weapon System Smart Sheets Data Base, L-119, 27 Jun 86.
25 Ltr, General Thompson to General John A. Wickham, Jr., Subj: [Monthly letter], 4 Jun 85.

masks from several nations, British chemical overgarments and a chemical agent monitor, and elements of a German chemical defense reconnaissance vehicle.[26]

(FOUO) Product Improvement Programs. Similar command attention toward product improvement programs also provided FY85 dividends to full-scale development programs. Longstanding concern over separate stovepipes for materiel development and product improvement programs, in part a function of separate line item funding, led to integration efforts that included a short-lived elimination of the Product Improvement Program Branch office, which was disestablished on 1 July 1985. Management of the PIP became decentralized with the weapon system support manager (WSSM)/PM/MSC chain again taking the lead and PIP's again being reviewed under normal budgetary review/decision procedures.[27] In the wake of the PIP Office disestablishment, the Program Integration Division continued to maintain an automated data base and to coordinate the third quarter PI Joint Review.[28]

(U) Although the PIP office was reestablished on 2 December—at the direction of the CG as the right formula for management of PIP and other materiel changes continued to be sought—it was brought back at less than half its former strength level, maintaining the direction taken away from the separate stovepipe for product improvements. Also in support of this initiative, in FY85 initial steps were being taken toward integration of the Product Improvement (PI) and Preplanned Product Improvement (P^3I) programs into the Mission Area Materiel Plan (MAMP) process. For FY86 this integration was to give broader visibility to product improvement programs, both PI and P^3I, "in the context of our overall materiel initiative planning and prioritizing." Although AMC and TRADOC had completed a VCSA tasking to develop PIP/ECP funding laydown priorities separately, it was considered that these materiel change programs would best be looked at in the context of the overall materiel acquisition program. An issue at the end of FY85 carrying over into the following year, was whether, given prior inconsistent reporting of ECP funds and the large dollar figure distributed through many

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26 Ibid.

27 State of the US Army Materiel Command, 1985, p. 16. Point paper, AMCDE-PIP, Subj: Establishment of PIP Office/ PIP Update to VCSA, 27 Nov 85.

28 AMCDE FY85 AHR submission.

small pots, HQDA would assume control and release of ECP funds. These issues were to have an impact in the following year on the mission of the PIP Office.[29]

(FOUO) Examples of Product Improvements can be found in the M60A3 combat vehicle and the UH-1 helicopter. In the M60A3 an improved Automatic Fire Extinguishing System (AFES) conversion kit was used to replace an older system. The AFES gave the M60A3 an automatic two discharge capability in the crew compartment as well as one in the engine compartment. In another effort to improve the fire survivability of existing tracked vehicles, AMC established a Tracked Vehicle Survivability Blue Ribbon Panel which was "to review tracked vehicle fire records, operational requirements and test procedures and results and to make recommendations that would improve tracked vehicle fire survivability.[30]

(FOUO) The UH-1 helicopter had a number of ongoing product improvement programs. Bell Helicopter Textron and Boeing Vertol were developing a composite main rotor blade (CMRB); two qualified sources would result from the leader-follower development concept being followed on the CMRB. Bell Helicopter Textron was also developing a hub spring which would inhibit mast-to-hub contact when the helicopter exceeded the flight envelope. An oil debris and discrimination system project was on target for contract execution in the first quarter of FY86. The UH-1 Night Fix Program was about to enter the application phase following procurement of the kit in the final quarter of FY85; some 300 kits were to be delivered each month beginning in the second quarter of FY86.[31]

(U) The first quarter DA Product Improvement Joint Review was held on 25-29 March 1985 and reviewed a total of 820 proposed PIPs. Of these, 493 were approved, 228 conditionally approved, 35 cancelled, eight disapproved, 14 deferred, and 25 reported as completed. The third quarter review was postponed until early FY86 because of the the disestablishment of the AMC PIP office.[32]

(U) Materiel Change Management Task Force. In August 1985, the CSA directed AMC to work with TRADOC and the DA staff to develop a comprehensive process for the management of materiel changes. In

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[29] State of the US Army Materiel Command, 1985, p. 16. AMCDE FY85 AHR submission. Point Paper, AMCDE-PIP, Subj: Establishment of PIP Office/ PIP Update to VCSA, 27 Nov 85.

[30] Ibid, p. 17 (State of AMC '85)

[31] Ibid.

[32] AMCDE AHR submission FY85.

September 1985 the AMC Commander established a Materiel Change Management Task Force, with members of all three organizations to study the materiel change process including the management of PIPs, Modification Work Orders (MWO), and Engineering Change Proposals (ECP).[33]

(U) Materiel Acquisition Review Board. Established by HQ, AMC at the very end of FY84 to improve the acquisition process, the Materiel Acquisition Review Board (MARB) gave high-level attention to getting materiel development projects off to good starts. In a 5 September 1984 letter announcing the new Board, LTG Moore stated such attention was needed during creation of the requirements document and the acquisition strategy for a program. These two sets of documents were described as "two of the most important products of the Concept Exploration Phase." The requirements document served as a "contract" with the user representative and the acquisition strategy was to be AMC's "roadmap" for accomplishing the contract. As a result and at the request of the CG, LTG Moore stated he was establishing the MARB to provide the necessary attention to these and other comparable documents, such as PIPs and requests for proposals, on all System Acquisition Review Council (SARC) programs. The board was to be staffed by "our most experienced functionals experts (preferably Deputy or Assistant Deputy Chiefs of Staff)" from Supply, Maintenance, and Transportation, Procurement and Production, Resources Management, Product Assurance and Testing, Manufacturing Technology, Readiness, and the Command Counsel—and the DCS for Development, Engineering, and Acquisition would serve as chairman. Other representation would include the Weapon System Staff Manager (WSSM), the Department of Army System Coordinator, and TRADOC's DCS for Combat Development, although other functional areas should be brought in as needed, LTG Moore declared.[34] Similar GO/SES-level Senior Level Review Boards (SLRB) were established at the MSCs, stemming from a 29 May 1984 tasking from LTG Moore.[35]

(FOUO) During FY85 the SARB has reviewed, revised, and ultimately approved draft requirements documents, System Concept Papers and Decision Coordinating Papers (including the acquisition

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[33] AMCDE FY85 AHR submission.

[34] Memorandum, LTG Moore, Subj: Establishment of HQ, AMC Materiel Acquisition Review Board (MARB), 5 Sep 84.

[35] Ltr, LTG Robert L. Moore, Subj: [Senior Level Review Boards], 29 May 1984. AMCDE FY85 AHR submission.

plans and RFPs for all SARC programs, selected DA in-process reviews (IPR), and IPR level programs). Good success was achieved through reduction of over-specification

(U) Standards Proliferation. An aspect of the effort toward streamlining the acquisition system was the struggle to avoid overspecificity in contracts. Already a concern of some standing with AMC, the Deputy Secretary of Defense issued a directive giving top level guidance.[36] Interim guidance offered by DSD and furnished to subordinate commands with a letter conveying the CGs own strong endorsement, charged that developmental stage contracts should "specify system-level requirements in mission performance terms" and that prior to full-scale development, military standards should be cited for guidance only. In full-scale development contracts, only "first tier" standards, those specifically cited in the contracts and in specifically referenced sections of referenced documents should have contractual applicability, while standards in generally referenced documents and other indirectly referenced documents would exist as guidance only. In procurement and reprocurement contracts, standards "to whatever tier was identified as the baseline for production shall be considered contractual requirements," necessitating care that only essential requirements be carried forward to any follow-on contract.[37]

(U) To help implement this policy, contractors were to be required to make recommendations for application and tailoring of contract requirements in one phase, for proposed application to the next succeeding phase. With progress through demonstration/validation and full-scale development, additional lower-tier specifications and standards would normally be selected and tailored for the next phase. All requirements related to design, development, and manufacturing were to be identified and confirmed by the time of the critical design review.[38]

(U) This policy was to apply to all development contracts issued after 30 September 1985 and to those systems already identified for acquisition streamlining, which included AMC's programs for a Light Helicopter Experimental (LHX), Advanced Anti-Tank Weapon System, Joint Tactical Missile System, family of Medium Tactical Vehicles, and Armored Gun System.[39]

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[36] DOD Directive 4120.21.

[37] Ltr, GEN Thompson to MG Henry H. Harper, 22 Aug 85, and enclosed memo, William H. Taft, IV, Subj: Acqusition Streamlining, 3 Jun 85.

[38] Ibid.

[39] Ibid.

(U) Design to Cost. In the Design to Cost program, estimated costs both for average units of equipment and for their operation and support costs were established at the entrance into full-scale engineering development. These DTC estimates were used as goals to guide the developers and to insure that cost was given the same emphasis as technical requirements and performance goals in the development of the equipment.[40]

(U) In mid-year, proponency for the DTC program was given to DEA and a dedicated DTC position created. All the MSCs were directed to establish similar DTC proponency offices and to establish boards that would review and approve baseline DTC goals both for Design to Unit Production Cost (DTUPC) and Design to Operating and Support Cost (DTOSC). These DTC goals, one an "average" manufacturing cost and the other a utilization cost, were to be established "at the earliest practical date"--preferentially on demonstration and validation but certainly no later than final commitment to full-scale production.[41]

(U) Although AMC did not consider all programs appropriate for DTC programs, DA required programs exceeding $10 million to have DTC programs. AMC requested that this floor be raised to $40 million on the argument the program was not cost effective below that threshold. The change was adopted and the regulation amended.[42]

(U) Elements of the revitalized AMC program was a carrot and stick approach toward contractors. Thus, clauses were encouraged affording substantial monetary rewards for attainment of DTUPC goals and penalties for failure. AMC also established detailed provisions for tracking and reporting the contractor's effectiveness in meeting these goals.[43] In addition, the AMC DTC regulation was updated; a DTC workshop was held at HQ, AMC, and a DTC course was being planned.[44]

(U) Affordable Acquisition Approach. The Acquisition Assessment and Policy Division directed the Army A^3 study (Affordable Acquisition Approach) that examined commodity areas to isolate recurring "high drivers"--those situations, elements, or practices contributing to costly weapon systems acquisitions. It developed

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[40] AR 70-64, Research and Development: Design to Cost.
[41] Ltr, GEN Thompson to MG Orlando E. Gonzales, Subj: Design To Cost Program, 22 Mar 85, and attached DTC Management Guidelines.
[42] Ibid.
[43] Ibid.
[44] AMCDE FY85 AHR submission.

recommendations to preclude repetition in future acquisition programs, briefing the results to the Commander, to CG, TRADOC, to MSC Commanders and PMs, and to DCSRDA.[45]

(U) Other Accomplishments. The Acquisition Assessment and Policy Division was involved in a variety of other actions. The MANPRINT program continued to be worked and 93 percent of the actions included in the MANPRINT Master Action Plan to institutionalize the use of MANPRINT in the Army were completed.[46] A Free Turn-In Program offered MSCs and PMs the opportunity to "turn in" problems that encumbered program progress. These problems were then assessed by HQ, AMC and fixes identified without retribution to the program developers.[47] The Vulnerability Assessment programs at the MSCs were, at the direction of the CG, institutionalized. The office started to assess the value of obtaining engineering analysis performed by contractors for use in government decision making. It also conducted an assessment of the Army Systems Acquisition Review Council (ASARC) preparation procedures and, together with TRADOC and the US Army Operational Test and Evaluation Agency (OTEA), developed a plan to improve the pre-ASARC process. It started implementation of the Atlanta X conference recommendations to involve industry in the development and revision of Army acquisition policy documents, bringing industry into the loop when NDI program regulations were amended. It revised AR 70-61 on type classification to reflect the policy that type classification is an integral part of the acquisition process.[48]

Automation Information Division (U)

(U) Word was received from HQDA that the Modernized Army Research and Development Information System (MARDIS) was to be eliminated as HQDA's RDTE data collection system unless one or more MACOMs had compelling reasons why it should be continued. AMC's response undertaken by the Automation Information Division of DCS for DEA was to continue its summer updating of MARDIS in order to continue collecting data that TECOM and parts of AMC headquarters obtained through MARDIS. At the same time a review was underway to

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45 AMCDE FY85 AHR submission.

46 Ibid. For more on MANPRINT, see the Materiel Acquisition Chapter in the AMC AHR for FY84.

47 Ibid. The program thus had similarities to the effort of the PM Office in FY84 to provide confidential assistance to PMs in remedying program problems, see the AMC AHR for FY84.

48 Ibid.

determine how to put the required MARDIS data elements, such as its manpower portion, into a UNIX/INFORMIX environment so that they would be compatible with the AMC Annual Review RDTE data system.[49]

(U) The Automation Information Division developed a class III automated information system to support DEA. Approval for the $3.9 million system came from DA within six months and was the first such approval obtained by AMC. A PYRAMID 90X minicomputer was the principle hardware purchase for a system that supported DEA as well as a number of other AMC offices and organizations through memorandums of agreement. These additional users included DCS Chemical and Nuclear Matters, DCS for International Programs, and the DCG for RDA. Support was also furnished the US Army Standardization Groups in England, France, Germany, Australia, and Canada and to the US Army Board Representative to NATO in Brussels. Computer usage (disk space) was provided to the US Army Missile Command for developing the Test Incident Reporting System (TIRS), a system updated by the PMs and available to all users of the system.

(U) DEA personnel developed data bases in support of the Weapon System Smart Sheets, Program Analysis Tracking System (PATS), Request for Proposal Question/Answer System, RDTE data element dictionary, and an AMC organizational chart. Applications programs gave support for such administrative tools as suspense systems, duty status rosters, message forms, daily and monthly calendars. Anticipated benefits from use of the system had not been achieved, however, as lack of trained personnel in programming and data base development resulted in loss of time in accomplishing assigned tasks. Also, supporting activities in headquarters lacked familiarity with procurement procedures, resulting in equipment acquisition delays and shortage of funds. Efforts were underway to upgrade the system through addition of more memory, terminals, and printers, as well as development of software.[50]

(U) The division was also the functional proponent for the Product Improvement Management Reporting System (PRIMIS). The functional description of the proposed system was completed, including development of a data dictionary, and work was continuing through the end of FY85 on completion of the requirements document. The question whether a contractor should be obtained to speed implementation of PRIMIS was under study.[51]

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[49] Ibid.
[50] Ibid.
[51] Ibid.

(U) The Materiel Status Office (MSO) and the division were working toward a data base that would enable the MSO to track the life cycle history of decisions and key milestones associated with an item of equipment. The data base would house decisions and actions submitted on Materiel Status Record (MSR) submissions and would be addressable by keyword identifiers and key numbers (line item, national stock, or project/task numbers).[52]

(U) The division was the responsible office of contact for staffing materiel requirements documents and in-process review packages within AMC. During FY85 approximately 120 requirements documents and 75 IPR packages were received for appropriate processing. The division also performed internal control functions such as tasking divisions within DCS/DEA to perform biennial Vulnerability Assessments and preparing a semi-annual internal control status report.[53]

Space Division (U)

(U) DEA's Space Division was established in June 1985 with the mission of managing the formulation, justification, analysis, defense and execution of DEA's space-related programs and activities. It served as the primary focal point for the USA Strategic Defense Command (SDC), the Strategic Defense Initiatives Office (SDIO), and the Defense Advanced Research Projects Agency (DARPA) on matters relating to "ballistic missile defense systems, directed energy, particle beams, propulsion systems, electromagnetic gun launchers, and other space-related technology matters." The Space Division was also the focal point for space activities for DA, TRADOC, the Corps of Engineers, and The Surgeon General and served as the point of interface between the Army Staff and MACOMs on space technology systems requirements. It became a working member of the HQDA Army Space Working Group which supports the Army Space Council, to which an AMC general officer is a representative.[54]

(U) Steps taken by the new division following its formation included:

* Establishment of a Space Technology Working Group;
* Review of industry space applications to identify those of potential value to the Army;

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52 Ibid.
53 Ibid.
54 Ibid.

* Coordination and liaison with industry, Air Force, Navy, and National Air and Space Administration to develop Army's data base of exploitable space-related technologies;

* Review of SDC space-related technology efforts (ballistic missile defense, kinetic energy weapons, surveillance acquisition tracking and kill assessment, systems analysis and battle management, and the Kwajalein Missile Range) and laydown of those efforts versus other ongoing Army (AMC, COE, OTSG) space-related efforts;

* Entering a memorandum of understanding between AMC and SDC in August covering a variety of topics;

* Participation in Army Space Inititives Study Group charged with developing an Army Space Master Plan; and

* Participation in ballistic missile defense (BMD) Reponse Options Study including Army reorganization for Strategic Defense and Space Commands.

* Establishment of space technology as a program element in the AMC budget.[55]

Operations and Support Division (U)

(U) As Army's proponent for the research and development functional area (FA51) of the Officer Personnel Management System, the Operations and Support Division of DEA rewrote the commissioned officer coding guidelines for research development (51) and test and evaluation (51B) areas of concentration. This was done as part of a CSA Army directive that a line by line review of all Army TDA positions be undertaken to identify correctly the experience and background needed by an officer to fill those positions. The coding guidance was thereafter to be used by MACOMs and staff agencies for the line-by-line review, and in AMC the division participated in the actual review. The division also rewrote chapter 51 of DA Pam 600-3, "Commissioned Officer Professional Development and utilization." And in cooperation with the HQDA Office of the Deputy Chief of Staff for Operations, the division developed a training program for FA51 commssioned officers at the United Kingdom's Royal Military College of Science.[56]

Program Integration Division (U)

(U) In FY85 DEAs Program Integration Division had two branches, the Program Integration Branch and the Product Improvement Branch. The latter, as noted above, being disestablished in July to leave PIP without an organizational focus. Its generalized function was to

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[55] Ibid.
[56] Ibid.

provide for coordination and integration of those disciplines necessary to the development and acquisition function--materiel acquisition management, manpower management, automated information reporting, and planning, programming, budgeting and execution of resources. Specifically managed through it, besides PIP, were the Program Management Control System (PMCS), Selected Acquisition Reports (SAR), Unit Cost Reports (UCR), Defense Acquisition Executive Summary (DAES) and Program Status Reports (PSR). The division had major responsibilities in manpower planning and equipment upgrade and improvement.[57]

(U) Program Management Control System. The PMCS was in its fifth year of implementation and improvement. It was a tracking system for selected weapon systems that allowed a careful audit to be kept on such matters as milestones and cost. In FY85 36 systems were under PMCS tracking, 35 of them AMC's and the 36th, the All Source Analysis System (ASAS), a HQDA DCSOPS-managed system. In the course of the year and at the direction of General Thurman, the VSCA, DEA was rewriting its circular on the PMCS as a draft Army Regulation. The regulation (AR 1000-XX) was expected to be made final by mid-1986.[58]

(U) Selected Acquisition Reports. Congressionally-mandated quarterly reports on materiel programs--SARs--numbered 23 at the beginning of the year and 22 at the close. Perturbations experienced in the reporting over the year reflected concern not only over particular programs, but over the content of the reports.[59]

(U) Four systems were added to the reporting list beginning with 30 September 1984. These were the ASAS, the Army Tactical Missile System (ATACS), Multiple Launch Rocket System Terminal Guidance Warhead (TGW-MLRS), and Short Range Air Defense Command and Control (SHORAD C^2). The House and Senate Armed Services Committees ordered five more Army systems to be reported as of the end of the first quarter FY85. These were the AH-1S and UH-1 helicopters, the Chapparal, the Mobile Protected Gun System (MPG-S), and the M-60 tank series. However, the SARs prepared on these and furnished to HQDA were withdrawn on the decision of the Undersecretary of the Army and the Assistant Secretary of Defense (Comptroller).

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57 Ibid.
58 Ibid.
59 Ibid.

(U) The OASD(C) issued DOD Instruction 7000.3 on 27 December 1984 directing a reduced SAR for the first quarter FY85 report (31 December 1984) in reliance on the FY85 DOD Authorization Act provision allowing submission of quarterly SARs only when a significant cost change (plus or minus 5 percent in total program acquisition costs) or a 90-day slip in a major program schedule milestone has occurred. The House and Senate Committees on the Armed Services (HASC/SASC) expressed their dissatisfaction with the reduced first quarter SARs. They called for extensive additional information not included in the first quarter reports. Then, in the FY86 DOD Authorization Act, Congress directed the Office of the Secretary of Defense (OSD) to restore the scope of SARs to that of SARs for the first quarter FY84 and in addition to report production rate and operating and support (O&S) cost data. The O&S data was to include that of any antecedent systems and was also to include an analysis of the current and previous systems. The amended instructions were the fourth set of revisions in as many years received prior to the first quarter SAR submission.[60]

(U) Two systems withdrawn from SAR reporting during FY85 were the Sergeant York program (DIVAD - Division Air Defense) and the AN/TTC-39. The final report on DIVAD, prepared 30 September 1985, noted the decision of the Secretary of Defense that the program be cancelled effective 23 August 1985. The 31 December 1984 AN/TTC-39 report reflected completion of the program and transfer of its remaining funds to the Mobile Subscriber Equipment (MSE) program.[61]

(U) Unit Cost Reports. During FY85 only two SAR-reporting systems were in breach of the 15 and 25 percent unit cost thresholds of the Nunn-McCurdy Amendment (PL97-252). Termination of the AN/TTC-39 and Sergeant York programs resulted in their being reported in technical violation of established Program Acquisition Unit Cost (PAUC) baselines by the 25 percent breach level threshhold.[62]

(U) One change was made in the reporting dates for the UCRs by Congress in the DOD FY85 Appropriation Act. The due day for submission to Congress of the UCR for the first quarter of the fiscal year, effective 31 December 1984, was changed from seven days after the end of the fiscal year to seven days after the President submits his budget to Congress.

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60 Ibid.
61 Ibid.
62 Ibid.

This allowed the UCRs to reflect the cost data in the President's budget and in the SAR rather than having it rely upon preliminary data that might be changed in the actual budget submission.[63]

(U) Defense Acquisition Executive Summary (DAES) Reports. The means inaugurated in March 1984 to keep DOD managers advised of progress on major weapon systems, AMC was reporting on 24 weapon systems in FY85.[64] Each report summarizes events and status in seven areas: program funding, contract cost, completion schedules, production delivery schedules, program and contract milestones, and overall assessment of the project manager. An Office of the Secretary of Defense automation effort for the DAES—AUTODAES—was tested with the Single Channel Ground and Airborne Radio System (SINCGARS), Pershing II, and Army Helicopter Improvement Program (AHIP) programs and implemented thereafter for all full format DAES reporting for the September 1985 requirement.[65]

(U) Program Status Reports. A change from a monthly to a quarterly reporting cycle on certain developmental programs resulted in a change of name for Monthly Status Reports that AMC had been furnishing HQDA since May 1982 as a part of the PMCS system. With the September 1985 reports, the otherwise unchanged format became the Program Status Reports (PSR). As of that date 37 systems were reported—11 on a monthly basis, 15 quarterly, and 11 on an exceptional basis.[66]

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63 Ibid.

64 Full format reporting occurred for Apache, Automated Digital Data System (ADDS), Army Helicopter Improvement Program (AHIP), Hellfire Modular Missile System, Joint Tactical Information Distribution System (JTIDS), Patriot Air Defense System, Remotely Piloted Vehicle (RPV), Single Channel Ground and Airborne Radio System (SINCGARS), Stinger, SHORAD C^2, and MLRS-TGW. Partial reporting on program funding and milestones were required for the M1 Abrams tank, Bradley Fighting Vehicle System (BFVS), Black Hawk UH-60 helicopter, M712 Copperhead, CH-47D helicopter, Multiple Launch Rocket System (MLRS), Pershing II (PII), Tube Launched Optically Tracked Wire Guided missile (TOW2), ASAS, and ATACMS. Three more systems were to be reported on in FY86: the Anti-Tacktical Missile (ATM), Mobile Subscriber Equipment (MSE), and Light Helicopter Experimental (LHX).

65 Ibid. See below in this section for summary FY85 automation efforts on this and other functional reports.

66 Ibid.

(U) Acquisition Management and Reporting System (AMARS). In the first quarter of FY85, HQ AMC undertook an effort to automate recurring functional reports, including SARs, UCRs, DAES Reports, and PMCS reports discussed above. The PMCS automation effort included the data portion of the Program Directive, known previously as the Program Directive Document (PDD), and the PSRs (previously MSRs). The system was being developed by Boeing Computer Services (BCS), which would also operate it on its timesharing network, "Copper Impact." AMARS, as the system was titled, aimed at near real time transmission of unclassified report data to HQDA and HQ AMC over existing telephone lines.[67]

(U) By the end of FY85, BCS had demonstrated a prototype of the SAR and had proven by field tests and training that the data could be transmitted and manipulated on the system by remote field users. The effort to automate the SAR, UCR, and DAES by the first quarter of FY86 was hampered by "continuing perturbations in the approved scope, content and format of each report," particularly the SAR.[68]

(U) DA Long Range Research Development and Acquisition Plan (LRRDAP). Together with TRADOC, the division identified and developed initiatives for DEA-managed systems as input to the DA LRRDAP. Relating to issues of prioritization, executability, and good business sense, the initiatives were developed to help decision makers ensure proper allocation of scarce resources and provide a balanced, executable program.[69]

(U) RAM-D O&S Cost Reduction Program. In FY85 the Program Integration Division led the AMC effort to cut operating and support costs in half by FY91 for selected weapon systems, a program known as the RAM-D O&S (Reliability, Availability, Maintainability, and Durability Operating and Support) Cost Reduction Program. Ten systems were in the program initially: Abrams tank, M-60 tank, Bradley Fighting Vehicle, Apache, Blackhawk, Cobra, CH47-D helicopter, Pershing II, Patriot, and MLRS. In early FY86, the DCS for Product Assurance and Testing took over the lead on the program to integrate it with the other elements of the RAM-D program.[70]

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67 Ibid.
68 Ibid.
69 Ibid.
70 Ibid.

Logistics Research and Development (Log R&D) (U)

(U) Although there had been a Logistics Research and Development program in existence for several years, institutionalization of its various aspects were still in a state of flux in FY85. Program goals were still those of developing concepts, procedures, techniques, and technological approaches to improve logistics support, but FY85 saw AMC coordinate a Log R&D Implementation Plan in October 1984 which was submitted to HQDA DCSLOG for approval. The plan "finalize[d] the responsibilities, procedures and structure necessary to track Log R&D projects and to determine the effectiveness and benefit to the Log R&D projects by comparing the resources spent versus the resources saved."[71]

(U) Also during FY85, TRADOC identified and prioritized 116 initiatives in this area. During the FY87-91 spring review of research development, and acquisition, an analysis of how well Army's RDA program meets the 116 initiatives found that 75 were addressed in the FY85-89 program and 88 were addressed in the FY86-90 program, a gain of 11 percent. Logistics deficiencies were also identified at the November 1984 Combat Service Support Mission Area Analysis/Logistics R&D Conference held at the USA Logistics Center. Later, a January 1985 AMC-sponsored conference on the same subject suggested solutions.

DEA's Office of the Assistant Deputy Chief of Staff for Special Operations Forces (U)

(U) See the FY85 ADCS for Special Operations Forces FY85 AHR classified submission in the HQ AMC Historical Office archives.

DCS for Chemical and Nuclear Matters (U)

(U) For information concerning chemical and nuclear matters, see the DCS for Chemical and Nuclear Matters FY85 classified submission in the HQ AMC Historical Office archives.

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[71] Ibid.

Product Assurance and Testing (DCSPA&T) (U)

Engineering Division (U)

(FOUO) Environmental Stress Screening (ESS). FY85 saw action taken by AMC to mark the importance and increase the utilization of environmental stress screening (ESS) within AMC. ESS consisted of exposing equipment to various temperatures, shocks, vibrations etc., to expose latent defects that could otherwise surface during use in the field. On 19 November 1984, the CG, AMC issued a Commander's Guidance Statement on Environmental Stress Screening.[72] The statement noted that as ESS "resulted in significant improvements in quality and reliability performance and reduction in manufacturing and support costs of weapon systems and equipment" AMC must include ESS "on all appropriate development, production, and spare parts procurement contracts and specifications" as well as in those depot rebuild programs where it might result in substantial savings.[73] Two examples of ESS impact are found in the Bradley Fighting Vehicle TOW Subsystem (BFVS-TSS) and the M1 tank Thermal Imaging System/Laser Rangefinder (TIS/LRF). In the case of the BFVS-TSS the estimated cost of ESS was $233,000 while the cost avoidance was estimated in the range of $46.8 million for 1,200 systems. For the TIS/LRF, the cost avoidance was calculated at $23.2 million on an ESS expenditure of $261,000.[74]

(U) A number of actions were taken in FY85 to implement the Commander's policy statement. CECOM was designated as AMCs ESS Center of Excellence. It, together with HQ, AMC's DCSPA&T and the other AMCs worked to disseminate ESS techniques and provide cross-fertilization of ESS experiences both in industry and in the Army. CECOM held five ESS training seminars opened to personnel from all MSCs, which resulted in all of the MSCs developing an ESS cadre. These seminars were to become an ongoing program. In addition, at the request of DCSPA&T, the Army Management Engineering Training Agency (AMETA) modified its Reliability Engineering courses to include a block of instruction on ESS.[75] As a followup, the CG

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72 AMC Commander, CGS No. 50, Subj: Environmental Stress Screening (ESS), 19 Nov 84, HQ, AMC.

73 Ibid.

74 State of the US Army Materiel Command, 1985, (FOUO), HQ, AMC.

75 DCS for Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ, AMC.

noted in his policy directive that he would call for ESS program briefings in his visits to the MSCs in the six months period following issuance of the statement.[76]

(U) DESCOM established a pilot depot overhaul program using ESS at Tobyhanna Army Depot using the overhaul program there for the AN/VRC 12 family of radios.[77] DCSPA&T developed and staffed a draft regulation on the AMC ESS program. Published 1 March 1986, the regulation mandated ESS for new equipment programs having anticipated contract value of $10 million or more but conditioned ESS on a determination of whether it would be economically advantageous to the government when reprocurements, procurement of spare parts, and depot overhauls were involved. Some equipment, such as cathode ray tubes, that would be subject to damage during ESS even if manufactured properly, could be excluded from the program.[78]

(U) RAM-D. Steps were taken in FY85 to control operating and support (O&S) costs that were driven by Reliability, Availability, Maintainability, and Durability (RAM-D) difficulties. The strategy developed identified specific RAM Improvement of Selected Equipment (RISE) projects, 11 in all, with the aim of achieving a 50 percent reduction in RAM-D support costs and a a comparable reduction in Not-Operationally Ready rates by FY91. New methodologies were developed drawing on peacetime aviation sample data collection. The primary thrust of these methodologies was to measure relative differences between peacetime and combat use, considering severity of the malfunction and its impact on the mission, to better predict combat mission reliability and operational availability.[79]

(U) The DCS for Product Assurance and Testing, with assistance from TRADOC, developed changes to AR 702-3, the Army RAM policy, that would provide guidance for developing RAM requirements. The revision to the AR was expected to issue in the second quarter of FY86.[80]

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[76] AMC Commander, CGS No. 50, Subj: Environmental Stress Screening (ESS), 19 Nov 84, HQ, AMC.

[77] DCS for Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ, AMC.

[78] AMC-R 702-25, Product Assurance: AMC Environmental Stress Screening Program, 1 Mar 86.

[79] State of the US Army Materiel Command, 1985, (FOUO), HQ, AMC.

[80] DCS for Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ, AMC.

(U) Aircraft Corrosion Control Program. Following through on a tasking of HQDA of 23 October 1983, AMC had drafted and staffed an implementing regulation on aircraft corrosion prevention and control. Coordinated with other Army agencies, the regulation was due to be forwarded to the Adjutant General for review and publication.[81]

(U) Root Cause Analysis. Root cause analysis was a structured, formal approach to analyzing the causes of failure in equipment that had been well tested beginning with its first use in the Lance program in the 1970's. It employed logic diagrams, interdisciplinary teams, and innovative idea generation methods and could be used effectively where other approaches failed to determine the cause of a failure and the corrective action needed; in the 105 times it was used during 1970's at AMCCOM or MICOM, it was successful on all but two occasions.[82]

(U) In FY85, AMCCOM was designated a "center of excellence" for root cause analysis, and with assistance from certain other MSCs and the DCS for Product Assurance and Testing began to spread its use throughout AMC. Three training sessions were held during 1985, the first at TACOM from 22-24 July, the second at HQ, AMC from 22 to 24 October, and the third at Corpus Christi Army Depot from 3 to 5 December. The trainees were expected to lead root cause analysis teams that could tackle problems within the MSCs or with contractors.[83]

(U) Software Quality Assurance. In October 1984, a directive mandated that MSCs address software quality as a major consideration during all phases of the acquisition life cycle for a weapon system. The policy required MIL-S-52779 and DOD-STD-1679 be used in applicable contracts to insure software quality. In January 1985 MSCs were provided a draft pamphlet, AMC-P 702-xx on Software Quality Requirements for Software Systems Development and Production, to use as an informal guide outlining tasks that the materiel developer could tailor to the specific SQA program in which he was involved.[84]

(U) Specific programs used by the MSCs included AMCCOM using McCabe's Complexity Metric as a contractual requirement, AMCCOM automating the McCabe Metric for the ADA and FORTRAN computer languages, incorporating "test hooks" directives into the Howitzer Improvement

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81 Ibid.
82 Ibid. State of the US Army Materiel Command, 1985, (FOUO), HQ, AMC.
83 State of the US Army Materiel Command, 1985, (FOUO), HQ, AMC.
84 DCS for Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ, AMC.

Program (HIP), and adding a IV and V Contractor Access clause to development contracts. CECOM was active developing ADA computer language and devoloping the Technology for Automating and Generating Systems, while TECOM came up with the Test Item Simulator (TIS).[85]

(U) Critical Parts. As a result of helicopter accidents, AMC reviewed the quality assurance controls over critical parts, i.e., those items which could cause an unsafe condition if they failed to conform to design data or quality requirements. From 3 June to 23 August 1985, an AMC review team visited the Corpus Christi Army Depot and several contractors--Sikorsky, Boeing, Bell, and Hughes--to review the critical parts and quality control programs. The team found that the critical parts program was too limited in scope and usually did not extend past initial manufacture, while the quality control programs "showed a lack of adequately detailed procedures, process controls and vendor controls." Much of the initial corrective response to the specific problems in the aviation field disclosed by this review team was conducted by AVSCOM. They expanded and strengthened their critical parts program by drafting a revised Critical Parts Management Pamphlet on 6 August 1985, issued a command policy letter on it on 7 October 1985, and developed a draft field surveillance plan on 16 August 1985. In addition they continued the critical parts program reviews at other aviation contractors and conducted follow-up visits to verify that corrective actions had been taken. This problem also led AMC to take some across-the-board actions on the critical parts program. AMC drafted and sent to the MSCs on 1 August 1985 guidance on the critical parts program structure. Just after the close of the fiscal year on 15 October 1985 they completed a draft regulation on that program that would apply to all commodity areas.[86]

(U) Standardization. The Quadripartite Working Group on Proofing, Inspection and Quality Assurance (QWG/PIQA) was to identify and recommend to the armies of America, Canada, Britain, and Australia (the ABCA nations) "means of establishing common or compatible proofing, inspection, and quality assurance procedures, techniques, terms, and definitions to enable ABCA Armies to recognize other's methods and responsibilities and to accept each other's standards." At the eleventh QWG/PIQA meeting on 18-26 March 1985, 99

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[85] DCS Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ AMC.

[86] Ibid.

recommendations or tasks were made with a total of 232 scheduled milestones. Of these 61 or 26 percent were completed by the end of the year.[87]

(U) A representative from the Engineering Division of the DCS for Product Assurance and Testing attended a meeting of the American National Standards Committee on Quality Assurance held in Washington DC on 20-21 March 1985. He represented tht Department of Defense and gave presentations on NATO and on military developments at the International Interface Subcommittee meetings.[88]

(U) The Joint Logistics Commanders Panel on Corrosion Prevention and Control recommended that the Joint Logistics Commanders establish a Corrosion Information Analysis Center (CIAC) to provide free services to DOD users at a cost of $100,000 per Service per year. The scope of work for the COIAC was given to the contracting officer at the Defense Electronic Contracting Center in Dayton, Ohio. The operation of the CIAC was to be an additional responsibility of the existing Metals and Ceramics Information Analysis Center (MCIC). The required funds were provided by the Services and MCIC was in the process of starting the CIAC.[89]

(U) Shortly after the end of the fiscal year the Deputy Chief of Staff for Product Assurance and Testing was appointed as Chairman of the NATO AC/250 Group of National Directors for Quality Assurance. This appointment was made at the 35th main group meeting, held at NATO Headquarters on 5 and 6 November 1985. At that meeting the main group also approved draft STANAG (International Military Standardization Agreement) 4174 "Allied Reliability and Maintainability Publications" and initiated the ratification process. In addition, ARMP-1 "NATO Requirements for Reliability and Maintainability" had been approved and published by the main group.[90]

(U) NATO AC/250 Subgroup IX for Defense Equipment Reliability & Maintainability Assurance acted as a focal point for the exchange of information and experiences between various NATO nations on equipment availability, that is, on reliability and maintainability. The subgroup also assisted in "the establishment of rationalized common policies, procedures and methods in this field." At the subgroup's 19th meeting held at NATO Headquarters from 11-13 December 1984, discussions were held on various ARMPs that were being developed.

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87 Ibid.
88 Ibid.
89 Ibid.
90 Ibid.

Work on other ARMPs had been delayed pending the completion of ARMP-2, "General Application Guidance on the use of ARMP-1." At the 20th subgroup meeting held at NATO headquarters from 9-11 September 1985, ARMP-2 was completed and forwarded to the main group. Work was also started on the development of ARMP-3, "Application of National R&M Documents, and on ARMP-5, 'Guidance on R&M Training." Work was also continued on ARMP-4, "Guidance for R&M Staff Target and Requirements Writers."[91]

Ammunition Surveillance Program (U)

(U) Quality Assurance Specialist (Ammunition Surveillance) (QASAS) Career Program. QASAS personnel took positions throughout the world under a mandatory rotation system that was managed by AMC's Director of Product Assurance and Testing as part of his duties as Functional Chief Representative for this career field. During 1985 the number of authorized spaces in this career field was increased from 602 to 644 but at the same time there was an increase in the number of vacant spaces, a problem that was addressed through more emphasis on recruitment and training.[92]

(U) The Air Force created a QASAS position in the Air Staff during FY85 and it appeared likely that the Air Force would create a number of new QASAS positions. The Navy was evaluating the need for QASAS personnel at Navy Coastals and at other Naval installations, with the results of the study expected to be available in FY86.[93]

(U) Ammunition Stockpile Reliability Program (ASRP). Improvements were made in a number of ASRP subprograms in FY85. Chief among these was the attention given to SB-742-1, the formal guidance given on ammunition inspection. The manual had presented both general and specific guidance in a single publication. Following study of the best means for submitting inspection criteria to the field, it was determined that the same format be kept, but with inclusion of specific technical information and guidance in appendices thereto. In execution of this approach, however, difficulties experienced in comprehending the text and its many cross-references prompted PA&T personnel to completely rewrite the manual, organizing into a new format with 12 chapters and appendices a-j. The entire process entailed total surveillance policy review, updating, comparison with related studies and reports, and refinement

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91 Ibid.
92 Ibid.
93 Ibid.

to incorporate the latest technology and thinking. Support was given by members of AMCCOM, MICOM, DESCOM, US Army Defense Ammunition Center and School (USADACS), and HQ AMC over a two year period.[94]

(U) The manual was issued in draft form in May 1985, authorized for immediate use. Contained in the publication as appendix "j" (the other appendices being specific technical data by families or types of ammunition) were five Supplementary Ammunition Surveillance Inspection Procedures (SASIP), detailed checksheets to guide the QASAS personnel. Initial comments received from field users confirmed, however, that the new manual was vastly more useful than the prior. At the close of FY85, the manual was being revised for reissuance, still in draft form, to embody certain recommendations of the Hardin study[95] that would significantly tighten parameters under which the QASAS could deviate from normal requirements. Additionally, further SASIP were in development, and the draft was submitted to editorial review prior to submission of a finalized document to the JAG for publication.[96]

(U) Also in FY85, AMCQA tasked USADACS to prepare a handbook to provide general guidance to QASAS on the scope of the Ammunition Surveillance program and where they could go for specific information. USADACS' first effort was a listing of frequently used reference material. It was asked to broaden the scope of their effort and include general guidance information on each major subject matter area in which QASAS may be required to perform.[97]

(U) A review of the formal inspection of empty magazines found that the six-month inspection schedule could be expanded safely to anywhere from 14 to 28 months depending on local conditions. Numbered seals to prevent unauthorized reuse of empty magazines were approved as well.[98]

(U) Problems arose from use of the newly developed 4.2" M329A2 mortar ammunition, and such use was suspended. The difficulty related to interference between the pre-engraved rotating band of the ammunition with the lands and grooves of the mortar tube. AMCCOM initially reported that the problem was caused by improper cleaning of the tubes, but "after several conflicting briefings and reports

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94 Ibid.
95 See below for explanation of the study.
96 DCS Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ AMC.
97 Ibid.
98 Ibid.

from AMCCOM/ARDC, and an observed reluctance by AMCCOM to suspend the involved ammunition, AMCQA (DCS for Product Assurance and Testing) directed AMCCOM to suspend all stocks of the M329A2 until all safety implications are resolved." A new obturator design that employed wire bristles to clean the mortar tube on each firing was developed and was being tested as possible solution.[99]

(U) Gas Mask Serviceability. Tests of gas masks, both stockpiled and in the hands of troops determined that serviceability levels were unsatisfactory. A special AMC program was initiated to inspect, screen, repair, or replace masks to bring the quality to the desired level, with AMCCOM implementing and completing the program in FY85 with a task force approach. The serviceability situation highlighted the need for a stockpile reliability program for chemical equipment similar to the one in effect for ammunition. At the direction of AMCQA, AMCCOM designed a program for surveillance of defensive chemical equipment. An Army Regulation was developed and issued to the field for immediate use while yet in draft form, while overall program policy was being incorporated into AR 702-6 with the Ammunition and Nuclear Weapons Stockpile Reliability Programs.[100]

(U) AMCCOM redesigned the M14 leakage tester for the M17 series gas mask in order to mechanize the "flexing" portion of the test. This redesign not only improved repeatability by eliminating human variability and subjectivity, it also increased testing productivity by 25 to 50 percent or more. New indicator gauges with larger scale deflections were also installed on testers used by Johnson Island. The new gauges, which cut back further on the possibility of human read errors, were to be installed on all remaining testers at surety sites by February 1986.[101]

(U) European Problems. Complaints from the Commander in Chief, US Army Europe (CINCUSAREUR) led to AMC investigation of new ammunition received in that command. It was found that the problems were primarily in the areas of packing and marking. An action plan to solve the problems was approved by the CG, AMC and was being implemented in FY85. Lessons learned were being furnished other MACOMs.[102]

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99 Ibid.
100 Ibid.
101 Ibid.
102 Ibid.

(U) Ammunition Stockpile Rotation. At the tasking of HQDA DCSLOG, the DCS for Supply, Maintenance and Transportation (DCSSM) had USADACS study whether the practice of shipping ammunition from the production facility to the user was detrimental to ammunition readiness. USADACS found that the practice was detrimental, and the Commanding General, AMC asked the DCS for Product Assurance and Testing to discover how best to obtain prompt implementation of the study recommendations. As a result, AMCCOM was tasked to develop an implementation plan with milestones, which it did. Following review of the plan, proponency for the issue was returned to the DCSSM for implementation of a plan that projected cost savings as well as improved ammunition readiness.[103]

(U) Hardin Report. The Commanding General, AMC directed an independent review of munitions demilitarization and stockpile management be conducted by LTG Harold F. Hardin, US Army (Retired), using an AMC team. A member of the DCS for Product Assurance and Testing acted as the contracted officer's representative (COR) on the project. The first two phases of the review were substantially completed in FY85, covering approximately 40 installations. A 4,800-page final report containing numerous and detailed suggestions for improving the program was issued, and AMCCOM was charged with taking the lead in developing and coordinating plans to implement the report recommendations.[104]

(U) Fasteners. In response to allegations that deficient fasteners were entering the Army stockpile, the IG investigated one such specific allegation at Rock Island Arsenal. The investigation determined that the fasteners were deficient. To determine if this was a reflection of a systemic problem, all MSCs and the Defense Industrial Supply Center were advised of the potential problem and asked to perform record reviews and physical tests as part of fact gathering to determine if a significant fastener problem existed. This was still in progress as FY85 ended, but preliminary results suggested that the problem was not significant.[105]

(U) Prepositioning Ship Munitions. During the CY84-85 maintenance cycles on Lighter Aboard Ship (LASH) vessels and breakbulk ships, Army and Marine Corps ammunition was found to be deteriorated. This brought high-level concern as to the serviceability and combat readiness of there positioned stocks stored afloat. JCS tasked the Army, as Single Manager of Conventional Ammunition (SMCA), to assess the situation and prepare any actions needed to ensure long-term serviceability and combat.

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103 Ibid.
104 Ibid.
105 Ibid.

readiness of the munitions stocks. The DCS for Product Assurance and Testing in turn tasked AMCCOM to prepare an assessment plan to meet these requirements. By the end of FY85 it had been determined that while deteriorated the ammunition stocks were still combat ready. Actions were being taken to determine the cause of the deterioration. A report to the JCS on near-term readiness was scheduled by the end of January 1986.[106]

First Article Testing (U)

(U) "Gutting" of the First Article Testing (FAT) program had occurred in a number of instances through government-approved delays in submitting the FAT reports, waivers of FAT results, and workarounds. As a result of this April 1985 determination, the DCS for Product Assurance and Testing was directed to prepare guidance and implementing instructions that would strengthen control of FAT management.[107]

(U) The DCS prepared a Commander's Guidance Statement (CGS) on FAT managent that was issued 12 October 1985, with implementing instructions to follow in 60 days. The CGS set forth the specific Federal Acquisition Regulations (FAR) authorized clause provisions for solicitations and contracts, calling for production quantities to come from the same facility as the first article whether the government or the contractor does first article testing and restricting use of alternative clause provisions permitting purchase of materiel before first article approval except on authorization by the Head of the Contracting Activity (HCA) and even then precluding production at other than a low rate until the FA testing is complete. It required that the failure of the FAT be followed by enforcement of all government rights, including charging the contractor for additional costs and holding the contractor to the original delivery schedule unless "valuable consideration" was received. In addition, the first article or articles should be retested if that be appropriate and consideration should be given to suspending or reducing progress payment. Other parts of the guidance statement addressed the need to provide the government with the contractual right to suspend or reduce progress payments if the first article or first article report is late or the FAT is failed as well as the right to exercise all contractual options after first article

106 Ibid.
107 Ibid.

approval. Moreover, the HCA was mandated to give full consideration to whether the contract be terminated for default due to lateness in providing FAs or FA reports.[108]

Model Plant Initiative (U)

(U) During FY85 AMC undertook an initiative to improve the operational effectiveness of contractor-operated plants under Army cognizance. "Model" Army-cognizance plants were established under several MSCs at the Iowa Ammunition Plant, APRO Hughes Helicopter, Inc., and the Lima Army Tank Plant for the identification of strengths and weaknesses, the optimization of operational features, and the addition of innovations to procurement quality assurance programs. Eventually, these would be exported to other Army plants and eventually to the Defense Contract Administration Services.[109]

Quick Alert Team (U)

(U) The AMC Quick Alert Team developed from a concept of a multi-disciplinary group drawn from the several DCS staffs capable of assembling quickly and giving timely analysis of situations "adversely impacting our acquisition process or the performance of Army materiel and equipment." Primary and alternate points of contact were established in the following functional areas: DCS for Procurement; DCS for Production; DCS, Engineer; DCS for Product Assurance and Testing; DCS for Readiness; DCS for Supply, Maintenance and Transportation; DCS for Development, Engineering, and Acquisition; the Command Counsel, and the Safety Office.[110]

(U) The team was expected to have an impact in FY86 and later years in providing immediate and accurate assessment of real, potential, or perceived problems. It would be ready to perform in-depth assessments of materiel-related problems arising in the field or at a contractor's facilities, and besides evaluating the validity and impact of a situation, would identify, intitiate and monitor effective corrective action.[111]

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108 AMC Commander, CGS No. 104, Subj: First Article Testing (FAT), 12 Oct 85.

109 DCS Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ AMC.

110 Ibid.

111 Ibid.

Waivers and Deviations (U)

(U) An action plan was developed in the final months of FY85 to obtain control of problems existing in the use of waivers and deviations from contract requirements. In June it was determined that adequate consideration was not being given to the validity of the requirements, that nonconforming materiel and equipment was being accepted in the interest of cost avoidance and in order to reflect timely delivery, and the control and reporting of waivers and deviations was not uniform. The task group assembled to address the problem determined that waivers and deviations served legitimate purposes but that tighter controls were needed to discipline the system. As a result a CGS was issued on the topic,[112] requiring that the impact of a waiver or deviation be fully coordinated with appropriate technical representatives of such interested parties as the developer, tester, user, and logistician. Approval of waivers and deviations was elevated to the MSC command level.[113]

Unissuable Materiel Visibility Program (U)

(U) Improvements were made in the Unissuable Materiel Visibility Program that augured significant long-term enhancement to the ability of the Command to avoid the waste of producing unissuable materiel. The DCG for Materiel Readiness had called for reduction by half in the amount of unissuables produced during CY85. The commodity commands developed plans to accomplish the objective, assisted by an AMC-wide meeting that clarified policy guidance, program scope, and the relationship of the program to the materiel management function. A revision of report criteria reduced the effort needed to generate reports and provided report detail sufficient to pinpoint problems as well as non-problem areas not requiring further upgrade. The higher visibility of the unissuable materiel problem achieved by the program was being institutionalized through a formal regulation.[114]

Kerwin Board II (U)

(U) At the direction of the Commanding General a reconstituted Kerwin Board was given a second look at the Command's quality assurance efforts in its overall acquisition program. Headed by General Walter T. Kerwin, Jr., USA (Ret.), the earlier Kerwin Board was assembled in 1981 to examine the ammunition program in particular, but traced commodity quality problems in general back to

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112 AMC Commander, CGS No. 100, 21 Sep 85, HQ AMC.
113 Ibid.
114 Ibid.

the interaction between the AMC and TRADOC when programs were being initiated.[115] The agenda given the reconstituted board was to review "the doctrine, practices, and procedures employed across AMC and its weapon system contracts, relative to the overall effectiveness and adequacy of current programs to assure the production of only quality products during the acquisition process." It conducted its review, making 58 recommendations; in FY85 an action plan to implement these recommendations was being executed.[116]

Contractor Liability (U)

(U) In FY84 AMC began a determined effort to hold contractors liable for defective equipment by applying warranties when they existed and by demanding voluntary repair or replacement of defective equipment at no cost to the Government in situations when warranties did not exist. In FY85 the program was well publicized and became strongly established, AMC recouping 79 percent of contractor-caused defective materiel at no additional cost to the Government.[117]

Army Warranty Program (U)

(U) Major steps taken in FY85 implemented the congressional directive that warranties be obtained on nearly all acquisition items in a manner that imposed no additional recordkeeping or paperwork responsibilities on end users and intermediate and direct support levels. The program was woven into the equipment life cycle. In the planning stage the warranty was integrated into the acquisition strategy, the integrated logistics support plan, and the procurement plan. In the procurement phase, the selection criteria for warranty candidates was defined as was the standardized coverage. An important new feature added here was the concept of expected failure coverage. That is, the Army anticipated the number of failures that would occur and would budget for their repair using standard operations and maintenance funding (OMA). The warranty would come into use only for failures which exceeded the predicted amount. Advantages of this approach were that warranty cost was kept to the administrative cost associated with the program, and users could continue with their normal maintenance functions without feeling any impact from the warranty.[118]

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115 See, Kerwin Board Report on Review of DARCOM Product Assurance Program, 16 Aug 82, HQ DARCOM.

116 DCS Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ AMC.

117 Ibid. See also, HQ AMC FY84 AHR.

118 DCS Product Assurance and Testing (AMCQA), FY85 AHR submission, HQ AMC.

(U) A draft model of the warranty cost-effectiveness program was developed and was refined by use by the MSCs during FY85 so that warranties would be applied only where they were cost effective.[119]

(U) Among efforts to simplify the field execution of the warranty by end users, MACOMs were required to submit individual claims only for intermediate-general support items. A passive system which used color striped labels and expiration dates showed which items had warranties without a paper check. A standard procedure established for presenting warranty claims used the form already in use for other maintenance requests. A warranty technical bulletin preparation guide was published as a Military Specificiation to standardize the presentation of warranty data to the using/claiming level. The DA Pamphlet on Materiel Fielding, Release/Transfer was modified to include warranty information. An index of Army Warranty Control Officers/Coordinators and another index of all equipment covered by warranties were issued in microfiche form and were also to be published as hard copy appendices to the May 1986 Maintenance Management Update publication.[120]

(U) AR 700-139, Army Warranty Program, was drafted and sent to The Adjutant General for publication. On 25 September 1985 AMC directed that in the interim prior to publication the draft AR be used by all AMC organizations. It too was to be published in the May 1986 Maintenance Management Update.[121]

(U) In the first quarter of FY86 AMC institutionalized its warranty organization with the creation in December 1985 of a Warranty Division as part of the DCS for Product Assurance and Testing. This office was also responsible to HQDA DCSLOG as the Executive Agent of the Army Warranty Program.[122]

System Evaluation and Test Division (U)

Protection of Information. As the Army's executive agent for Range Signal Security (RSS), AMC obtained HQDA approval in July 1985 for the Army RSS Implementation Plan. It covered protection of classified telemetry data at TRADOC, Ballistic Missile Defense Systems Command (BMDSCOM), and TACOM facilities. When AMC received DOD guidance that sensitive as well as classified data required

119 Ibid.
120 Ibid.
121 Ibid.
122 Ibid.

protection, such guidance was furnished all Army agencies with the request that they develop Secure Telemetry Implementation Plans (STIP) and forward them to AMC to support development of the Army Secure Telemetry Implementation Plan (ASTIP). The ASTIP was scheduled for completion in October 1986.

DCS for Procurement (U)

(U) The DCS for Procurement was part of the DCS for Procurement and Production at the beginning of FY85, before that element underwent two significant organizational changes. First, on 15 15 October 1984, the Contract Management Division and 15 spaces of the forerunner DCS were reassigned to the DCS for Resources Management. Then, on 1 July 1985, the DCS split into a DCS for Procurement and a DCS for Production. In the split, the DCS for Production took the 46 spaces from the former Production and Industrial Preparedness Division and one space from the Plans and Administrative Office, and revamped as described in the following section. The DCS for Procurement thus had the following major functional areas within its control for the full year: competition advocacy, procurement policy and analysis, procurement management, and procurement career development.[123]

(U) The DCS for Procurement changed chiefs on 15 July 1985. BG Michael J. Pepe took over as DCS for Procurement from MG David W. Stallings.[124]

Competition Advocacy (U)

(U) Competition in Contracting Act (CICA) and Other Directives. A number of significant legal changes in the area of competition changed the way AMC was doing business. It published a White Paper on Competition in May 1985 to inform all of its activities of these changes and to provide guidance.[125] Part of the Deficit Reduction Act signed into law on 18 August 1984, the Competition Contracting Act of 1984 (Public Law 98-369), became effective 1 April 1985. It

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123 DCS for Procurement, FY85 AHR submission, HQ, AMC. For DCS Procurement involvment with specific weapon systems, see the Force Modernization chapter.

124 Ibid.

125 AMC White Paper, Competition, May 1985, p. 5.

represented in the opinion of some "the most significant piece of congressional legislation affecting the military departments since the enactment of the Armed Services Procurement Act of 1947.[126]

(U) The new statute changed the basic thrust of competition from a results-oriented "effective competition" standard to a standard of "full and open competition." Competition advocates in the several services and major subordinate commands were established to press for this ideal, that every responsible source be permitted to compete. Procedurally, CICA established seven possible exceptions to full and open competition and set a series of approval threshholds for any acquisition that was not full and open competition. Thus, the Contracting Activity Special Competition Advocate had to sanction nonconforming acquisitions with contract values between $100,000 to $1 million; the head of a contracting activity or his SES or general officer designee for contracts between $1 million and $10 million, and an Army senior procurement executive, the Deputy Assistant Secretary of the Army (Acquisition) for contracts over $10 million.[127]

(U) During FY85 a drama played out over the constitutionality of this new law, specifically the provision added by Congress over the objections of the Administration requiring suspension of contract performance post award on filing of an objection by a losing bidder. Pursuant to the Act, a protest filed with the Comptroller General concerning an alleged violation of a procurement statute or regulation would act to bar award of a contract, if the contract was not yet awarded, or to suspend performance under the contract until the General Accounting Office (GAO), an arm of Congress, rendered a decision on the protest. The sole possible exception was where the head of the procuring activity responsible for award of the contract notified the Comptroller General of his finding that award/performance of the contract was in the best interest of the US or that urgent and compelling circumstances significantly affecting interests of the US would not permit waiting for the Comptroller General's resolution of the protest. The Office of the Attorney General asserted the legislature had unconstitutionally usurped the powers of the executive branch of government. The Office of Management and Budget directed noncompliance with the statute.[128]

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126 BG Charles R. Henry, "Competition in Army Procurement: Foundation for Readiness," Government Executive, Oct 1985, p.14.

127 AMC White Paper, Competition, May 1985, pp. 2-3.

128 Ibid.

(U) Other purposes of the new law were to eliminate the distinction between formal advertising and negotiation and to establish a new provision for protesting bids, one that would allow a contract award to be stayed while a protest was investigated.[129]

(U) Almost before the ink was dry on CICA, Congress enacted the DOD Appropriations Act of 1985, which in Section 8083 provided that full scale development funds would not be released for a DOD major system until the Secretary of Defense affirmed to Congress either of two situations--that there will be two or more production sources for the system or that the system would be procured in insufficient quantities to make dual sourcing appropriate. It then followed with the Small Business and Federal Procurement Competition and Enhancement Act, Public Law 98-577, that modified CICA and other previous statutes regarding synopsis requirements and a variety of other competition policies and procedures.[130]

(U) The statutory enactments were followed by implementing regulations and guidelines. DOD Directive 4245.9, "Competitive Acquisitions," was issued on 15 December 1984. It outlined responsibilities, imposed requirements and established new timeframes for establishing competition goals and annual reporting. Federal Acquisition Circulars 84-5 and 84-6 and Defense Acquisition Circular 84-10 providing additional implementing instruction. Army's policy guidance was issued shortly before the AMC White Paper came out, on 16 April 1985.[131]

(U) The changes brought more intensive management to promotion of competition as all levels were directed toward insuring that full and open competition was obtained whenever possible. For example, PMs and other acquisition managers had to invest money early in the cycle to obtain benefits of full competition later on. It was important to consider obtaining complete technical data packages early in the acquisition cycle. Also, acquisition strategies and noncompetitive situations had to be periodically reviewed to see if they could be improved.[132]

(U) Competition Management Office. Organization changes resulting from the new law included establishment of an AMC Competitiion Mangement Office in the DCS for Procurement. The function of this office included reviewing and, when appropriate,

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129 Ibid.
130 AMC White Paper, Competition, May 1985, p. 2.
131 Ibid. And Henry, "Competition in Army Procurement," p. 18.
132 AMC White Paper, Competition, May 1985, 4-6.

challenging all noncompetitive acquisitions, tracking progress toward AMC competition goals, reviewing all noncompetitive actions that required DA approval, developing a competititon policy in conjunction with the DA Competititon Advocate General, participating in Materiel Acquisition Review Boards as a member and in selected post citation reviews and PM program reviews, conducting field liaison visits, working to eliminate impediments to contract competition, publishing articles on AMC's efforts to expand competitition, and keeping the Commander of AMC informed of progress in this area.[133]

(U) Each MSC was directed to develop its own competition management office out of existing resources. In addition, the White Paper encouraged appointment of competition advocates on either part or full time basis at contracting offices subordinate to acquisition activities.[134]

(U) The AMC Competition Management Office was established in the DCS for Procurement by reorganizing the DCS Procurement PM for Spare Parts, keeping its function of economic procurement of spare parts. Among initiatives for improving competition in FY85, a Competition Advocate Shopping List (CASL) listed future buys to be made by MSCs, thereby alerting potential suppliers to quantitites and types of equipment to be purchased during the year on which they might wish to bid.[135]

(FOUO) Postage Stamp Persuasion. In August 1985, AMC undertook an effort to obtain removal of restrictive labels on contractor drawings. With such labels, other contractors were kept from reviewing the drawings and thus from competing with the original contractor in supplying the items depicted. Aping programs of the other Services, contractors submitting such drawings were notified by letter that the Government intended to withdraw its restrictions unless the contractor could fully support them as being developed at the contractors own expense. This "postage stamp persuasion" obtained an 8-10 percent success rate in the Navy program of seeking voluntary removal of propriatary claims, and a 40 percent success rate in a more aggressive Air Force program.[136]

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133 Ibid, p. 7.
134 Ibid.
135 DCS for Procurement, FY85 AHR submission, HQ AMC.
136 Ibid. State of the US Army Materiel Command, 1985, (FOUO), HQ AMC.

(U) Reverse Engineering. Late in FY85 a program to help solve the problem of inadequate technical data packages on sole source procurements was developed. The $5 million pilot project called for contracting for a reverse engineering effort where technical data on selected replenishment spare parts was limited, perhaps by propriatary restrictions, and competitors lacked sufficient information on which to bid. The House Appropriations Committee called for the program for all of the Services in its 1984 report on the FY85 DOD Appropriation Bill.[137]

(U) In the initial stage of the pilot effort, TROSCOM drafted a model statement of work and in early August let a $1 million initial contract in which the contractor would select 20 items from among 120 nominated by various MSCs. The contractor was to develop production drawings and specifications that the Government could use to competitively bid the items. The second stage called for distribution of the remaining $4 million to the MSCs to do their own reverse engineering contracting. The distribution was weighted in favor of MSCs with the worst competitive contracting statistics. AVSCOM received $1,157,260; AMCCOM, $276,239; TACOM, $276,624; CECOM, $564,580; and MICOM, $1,725,297. The MSCs were permitted the option of applying the funds through a competitively let new contract, modifying an existing competitive contract, or applying the funds to TROSCOM's project.[138]

(FOUO) In one successful application of reverse engineering, a TACOM contract specialist purchased a sole source air filter from a dealer, had it reversed engineered, and obtained contract savings of $746 thousand on a purchase that would increase by $10 for each additional filter purchased.[139]

(U) Competition Statistics. In FY85, AMC raised the rate of competition to 34 percent of dollars awarded from 30 percent previously, and to 55 percent of total items, from 52 percent previously.[140]

(U) Spare Parts. The Spare Parts Review Initiative (SPRINT) continued to be a successful program for economical procurement of spares, although attention to the program waned somewhat as resources were diverted to implement requirements of CICA. An evaluation of

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137 DCS for Procurement, FY85 AHR submission, HQ AMC. AMC Competition Advocate/Spare Parts Office, Reverse Engineering Pilot Program: Progress Report, 209 Aug 85, and appendices.

138 Ibid.

139 DCS for Procurement, FY85 AHR submission, HQ AMC.

140 Ibid.

the SPRINT program, called Total Reevaluation Under SPRINT Thrusts (TRUST), was undertaken and at the end of the year was still underway. As a program to control costs by such means as promoting competition, the SPRINT effort was a matured and institutionalized effort. Many of the new programs aimed at increased competition across the board were influenced by the SPRINT effort and would themselves directly impact upon and improve the economical procurement of spare parts.

(U) The spare parts break out program in FY85 led to cost avoidance estimated at $250 million, up from $228 million a year earlier, simply by bidding nonpropriatary components of proprietary items. Of AMC's active total of 73,489 spare parts items subject to be coded for breakout and independent competitive procurement, 32,299 were screened and coded in FY85. In the refund program, in which companies refunded the Government for having charged excessively for spare parts, the government received 127 refunds for $4,716,418, the largest component being a $4,003,923 refund from General Motors for Commercial Utility Cargo Vehicle (CUCV) spare parts. In FY84, nine refunds were received totalling $368,654. The competition rate for spare parts was 48 percent of the dollar amount awarded, and 51 percent of items purchased. In FY84 the dollars spent in competitive acquisition were 52 percent of the total. The spare parts value engineering (VE) program showed a cost avoidance of $60.1 million, nearly triple FY84's $21.3 million figure. A total of 1,470 "hotline" inquiries on possible overpricing of spare parts were received in FY85, and 1,090 were resolved. Training in spare parts purchasing continued with 1,540 personnel attending the Spare Parts Management course and 17,624 hours being spent in local training on spare parts acquisition.[141]

Office for Procurement Policy and Analysis (U)

(U) Functional Area 97. Within the DCS for Procurement, the Office of the Assistant DCS for Procurement Policy and Analysis served as the Army proponent for Functional Area 97, Procurement/Production Officer in the Army officer personnel system. Total Army-wide authorizations for this career field increased in FY85 from 587 to 607. Although this was less of an increase than in FY84, the number of Functional Area 97 authorizations climbed 31 percent during the past two years. The total inventory of FA 97 officers was 1300, a number which allowed a satisfactory utilization rate of qualified officers. There was also an increase in command positions for lieutenant colonel and colonel positions in FA 97,

[141] Ibid; State of the US Army Materiel Command, 1985.

bringing that total to 59. At the colonel level, however, only 49 qualified colonels were available to fill the 62 colonel-level authorized positions.

(U) A number of other initiatives and improvements in the program occurred in FY85. The number of FA 97 officers training with industry was increased from 30 to 51. This program was also included into the Army Education Requirements Board, thus improving the stability of the program and increasing the efficiency with which officers trained under the program would be selected and assigned to positions requiring their skills. In addition, based on the direction by the VCSA that ten officers per year fill audit positions at the Defense Contract Audit Agency (DCAA), a training program was established with DCAA whereby 10 officers a year would be trained at the auditor trainee level. In both programs the training would be for one year while the officer was "en route to a three-year utilization tour to maximize the skills they have acquired."[142]

(U) The most significant change in the program accomplished in FY85 was the adoption of a single-track system for the FA 97 career field by the AMC and the US Army Military Personnel Center, following a briefing to the CSA in which he directed that "Army should support the position of General Thompson, Commander, AMC and move out" on establishing a mix of single and dual tracks for FA 97. Beginning in FY86, officers in the grades of captain through lieutenant colonel could seek to remain in the procurement/production field rather than alternate between FA 97 and some other career field specialty. On implementation, the program target was that 10 to 12 officers per eligible year group--up to 50 percent of the total FA 97 authorizations--could be selected for the single track option after making voluntary applications for it to the Military Personnel Center.[143]

(U) Procurement Workshops in Iberia. In late CY84, General Thompson visited Spain and Portugal and conveyed AMC's interest in expanding defense cooperation. As a result of the visit, two three-day workshops were held in those countries to reinforce the message with government and industry and to advise industry in both countries of the mechanics of dealing with AMC, DLA, and USACAE . At the workshops the emphasis was on procurement of spare parts and

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142 Ibid; Memorandum, DCS Logistics for DCS Personnel, Subj: Procurement Briefing to VCSA029 Apr 85, 30 Apr 85.

143 DCS for Procurement, FY85 AHR submission; Memorandum for Record, Subj: OPMS IPR for CSA, 27 Aug 85.

frequently procured secondary items. Representatives from HQ AMC, AMCCOM, AVSCOM, CECOM, TACOM, TROSCOM, DLA, and USACAE participated in the workshops.[144]

(U) Contract Management Review/Acquisition Management Review. A self-initiative to review performance of AMC activities' acquisition functions, contract management reviews (CMR) were performed on contract administration activities under AMC congnizance. In FY85 a CMR was performed upon the US Army Procurement Representative Office (ARPRO) at McDonald Douglas (formerly Hughes Helicopter) from 18-29 March 1985. The review found the ARPRO to be performing its contract administrative function at a marginal level, but a follow-up surveillance review conducted from 27-30 August 1985 found that the ARPRO had corrected its deficiencies. A further follow-up was to be conducted in the fourth quarter of FY86.

(U) Acquisition management reviews (AMR) were conducted in accord with the requirement in DODD 5126.34 and AR 715-11 that Military Departments and MACOMs, under the Defense Acquisition Management Review Program, conduct periodic reviews of procurement operations under their cognizance.[145] These AMRs focused on contracting operations, either on all aspects of the contracting operation or on specific functions or areas that the AMC Commanding General, Deputy Commanding General, or DCS for Procurement deemed critical.

Acquisition Management Reviews, FY85

Organization	Dates
PM SANG	7-19 Nov 84
AFRTS	14-18 Jun 85
AMCCOM	25-29 Mar 85
MICOM	22-26 Apr 85
U.S. Military Academy	28-31 May 85
CECOM	15-19 Jul 85
DESCOM	6-8 Aug 85

Source: DCS Procurement Historical Report, FY85

[144] DCS for Procurement, FY85 AHR submission.

[145] AMC was responsible for reviewing the procurement operations in several organizations that were not otherwise under AMC control, such as the United States Military Academy.

(U) In general, the AMRs showed that the activities were conducting their contracting activities in an efficient manner; however, some recommendations were made to improve both the quality of the acquisition actions and the efficiency of operation.[146]

(U) Business Clearance Reviews. Business Clearance Reviews were required by the AMC FAR Supplement 1.602-2-100 which prescribed such a review by HQ AMC for all noncompetitive negotiated contracts of $50 million or more and for other selected high interest items.

(U) In September 1985 this was changed to include all negotiated contracts, noncomptetitive or competitive, for $50 million or more. Such a review helped ensure that the government team was adequately prepared for the negotiations, that its negotiating position was supportable, that audit or other recommendations were resolved, and that adequate terms, conditions/tradeoffs were developed. During FY85 the Office of the ADCS for Procurement Policy and Analysis conducted 34 procurement actions totalling an estimated value of $7.7 billion. Some of the issues addressed during these reviews included whether compensation/fringe benefits were in line with the Joint Logistics Commander's guidelines, whether similar issues were addressed uniformly by different MSCs dealing with the same contractor. Also, whether MSCs were rushing into negotiations to meet obligation schedules without sufficient or aggresive price negotiations, whether option prices for purchase of larger quantities were adequately evaluated, whether spare parts and their prices were included in the production buy, and whether there was adequate support for the cost of the warranty.[147]

(U) Contract Audit Initiatives. In late FY85, AMCPP-S developed several initiatives for improving the tracking, resolution, and use of audit reports in FY86. These included keeping management at all levels continually informed of the status of audit reports, analysis of audit reports to develop trends, sending flash reports to MSCs on serious systemic problems, periodic visits with Defense Contract Audit Agency (DCAA) auditors to address specific audit problems, insuring that audit issues were addressed in AMRs, reviewing audits of the top 25 Army contractors to identify major findings and deficiencies for corrective action, and establishing adequate review levels for the resolution of audit issues.[148]

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146 DCS for Procurement, FY85 AHR submission.
147 Ibid.
148 Ibid.

(U) Control of Contractor Indirect Costs (Overhead). AMC's success in 1984 with an in-depth analysis and negotiation with contractors to reduce indirect costs led the Deputy Secretary of Defense to require that the Services and defense agencies exercise special efforts in this area in FY85. The new discipline in contract cost evaluation promised to be in full operation in FY86.

(U) In FY85 a start was made on an early warning system for detecting surges in contractor indirect expenses. It integrated AMC forecasts with cost performance data for the top 25 AMC contractors to eliminate tunnel-vision problems caused when individual MSCs were unaware of the impact of other AMC business on a contractor with which they were dealing.

(U) Except for three Army plant representative officers and the tank plants, indirect AMC contract costs were negotiated by non-Army contract administration officers. Three major issues were seen in these negotiations. The first was lack of visibility of future business. Here AMC was seeking ways to keep the contractors' business base estimate both current and complete. The second issue concerned the proliferation of data processing equipment, including those used for design and manufacture as well as management information. Although this resulted in increases in rent/lease, depreciation, and indirect labor costs, there should also have been a corresponding decrease in direct labor costs. The third issue was the surge in weapon system acquisitions since 1981 which was leading to increases in a variety of indirect costs: employee fringe benefits, facility duplication, plant rearrangement and maintenance utilities. These costs required careful review to determine their reasonableness as well as their allowability and allocation.

(U) AMC had two candidates in FY85 for should-cost studies because of known problems in this third area; however, the intensity and length of formal should-cost studies would have interfered with ongoing corrective actions in those contractors' accounting systems, corrective actions that were required for adequate evaluation of their actual and projected indirect costs. The studies were dropped, and AMC instead assumed the leadership of, and provided additional technical support to, a study of another candidate selected by DLA. The resulting Forward Pricing Rate Agreement promised to save over 100 million dollars in the next four years. Another in-depth review of indirect costs conducted at another contractor brought anticipated savings as well; also, lessons learned were such that improved professional discipline benefits should accrue in the following years.

(U) In general, AMC's should cost program was reaping the benefits of studies of major procurements over the prior four years. Beyond the savings, "an expert corps of pricing, technical, and operations research people in our acquisition structure has developed who can evaluate contractor's proposals, critique them, and develop alternatives with empirical and theoretical support."[149]

Procurement Management Division (U)

(U) Much of the work of the Procurement Management Division (AMCPP-M) concerned specific weapon systems and is discussed in the Force Modernization chapter. However, a number of more general issues were also handled by this organization.

(U) Technical Data Rights. The Joint Logistics Commanders had chartered a committee in June of 1985 to develop a comprehensive joint Service program to acquire and enforce government data rights. A Joint Logistics Commanders' directive containing uniform procedures for the acquisition, acceptance, validation, challenge procedures and enforcement of these data rights was anticipated. At the 25 October 1985 meeting of the committee the Air Force Systems Command was elected to the chairmanship of the group, and each Service was given the lead role on assigned tasks. AMC took the lead on validation and challenging. Another development in the area of data rights was the design of a course that would be offered to all AMC activities.[150]

(U) Justifications and Approvals. One effect of the Competition in Contracting Act (effective 1 April 1985) was a change in the approval procedures for Justifications and Approvals (J&A) for other than full competitive procurements. J&As for more than $10 million were staffed through HQ AMC to the DA Competition Advocate Office and then to the Secretary of the Army for Research, Development and Acquisition (SARDA) for approval by the Deputy Assistant Secretary of the Army (Acquisition). From 1 April 1985 to the end of FY85, 69 J&As were processed through AMC. Initially, from April through July 1985, processing took an average of 25 days at AMC and 30 days at the DA level; however, following changes in AMC's procedures and a letter from the Deputy Chief of Staff for Procurement to HQDA/SARDA, processing goals for AMC were established at seven working days and for DA/SARDA at 19 days. At the end of the fiscal year AMC was averaging nine working days per approval.[151]

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149 Ibid.
150 Ibid.
151 Ibid.

(U) Acquisition Plan Reviews. Another result of the Competition in Contracting Act was greater emphasis in higher headquarters review of insuring that Program Managers were providing for full compliance with the law in their acquisition plans, assuring that full and open competition for both the end item and its components would exist. Acquisition plans were staffed through HQ AMC to DA/SARDA for approval by the Deputy Assistant Secretary of the Army (Acquisition). Originally it took an average of 25 days at AMC and 45 days staffing at the DA/SARDA level, but in the same action that speeded up the procedure for Justifications and Approvals, goals were set for AMC of 14 working days and for DA/SARDA of 35 days. AMC was averaging 12 days at the end of the fiscal year. During FY85, AMC processed 141 Acquisition Plans.[152]

(U) Additional Workload Data. Processing time for other matters dealt with by the division included 120 days in which to make unpriced contractual instruments definite (180 days if a DCAA audit was required), and approval being required from the Deputy Assistant Secretary of the Army for further extension. During FY85, AMC processed 180 Definition Extension requests and 93 Unpriced Order requests.

(U) DCS Procurement reviewed various investigative reports and audits in order to initiate or recommend whatever corrective action was required. During FY85 the following were reviewed: 46 Inspector General reports, 16 General Accounting Office reports, 56 Army Audit Agency reports, and 40 DOD Inspector General Subject Reports, for a total of 158 investigative reports and audits.[153]

DCS for Production (U)

(U) As an element of the former DCS for Procurement and Production at the beginning of FY85, the DCS for Production acquired a singular identity on 1 July 1985.[154] On becoming a separate DCS, Production went from being a division with three branches (industrial mobilization, production, and resources management) to a DCS with four assistant deputy chiefs of staff. There was an ADCS for Production and Industrial Preparedness and three other ADCS, each with responsibility for at least two divisions. The ADCS for Production Support encompassed the Production Assessment Division and

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[152] Ibid.
[153] Ibid.
[154] See discussion of reorganization in immediately preceeding section on DCS for Procurement.

the Engineer and Production Support Division. The ADCS for Weapons System Production Management oversaw the Weapons and Munitions Division, the Missiles, Communications and Electronics Division, the Tracked Combat and Tactical Vehicles Division, and the Aircraft and Other Support Division. Finally, the Program Formulation Division and the Industrial Mobilization Planning Division fell under the ADCS for Industrial Preparedness. The DCS by the end of the year was authorized six military and 82 civilian spaces, as well as 25 individual mobilization augmentation authorizations.[155]

Defense Priorities and Allocation System (DPAS) (U)

(U) In March and April 1984, Congress extended provisions of the Defense Production Act until 30 September 1986. The Act is the legal basis for the Defense Priorities and Allocation System, regulations for which were issued by the Department of Commerce in final form on 30 July 1984. The DPAS was binding on industry and government personnel and obtained preferential treatment and timely delivery on defense contracts and orders. The DPAS supplanted the Defense Materials System (DMS) and the Defense Priorities System (DPS).[156]

(U) Under the DPAS final rule, which became effective 29 August 1984, there was a delegation of authority to the Secretary of Defense, but by the end of FY85, the Secretary had not redelegated his regulatory authority as he had under the prior regulatory scheme. Accordingly, priorities and allocations actions which were in process were within the scope of previously delegated authority.[157] The Defense Priorities and Allocations Council (DPAC), composed of senior defense priorities and allocations officers, continued to oversee development of regulatory guidance needed to implement and improve the DPAS. DOD Series 4400 guidance was being revised by the Institute for Defense Analysis (IDA) with technical assistance by Service representatives, including two represntatives from AMC. Six drafts, each requiring substantial review and significant changes were made, and final publication was projected for early 1986, after which further implementing guidance by the Services was anticipated.[158]

(U) In FY85 the Department of Commerce and AMC were engaged in a joint effort to educate government and industry contracting personnel about the DPAS. The Defense Priorities and Allocation

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[155]DCS for Production, FY85 AHR submission, HQ AMC.
[156]Ibid.
[157]Ibid.
[158]Ibid.

course given by the US Army Management and Engineering Training Activity (USAMETA) was revised in FY85 to incorporate the new DPAS rules and the DOD program guidance.[159]

(U) DOD Priorities and Allocations Symposium. An AMC contingent led by Colonel J. C. Dondlinger, chief of the Production and Industrial Preparedness Division, Colonel J.C. Dondlinger, presented AMC's perspective and activities in the area of industrial preparedness, priorities and allocations, and production base support at the first annual DOD Priorities and Allocations Symposium, sponsorerd by the Office of the Under Secretary of Defense, Research and Engineering, in June 1985. AMC was to host the symposium in 1986.[160]

Production/Resources Base (U)

(U) Precision Optical Components. In FY85 the Joint Logistics Commanders had proposed a precision optics supplement to the FAR that, in order to maintain a North American production base, would limit procurement of such items to American and Canadian sources. Concern over the impact such limitation would have to procurement costs led the Assistant Secretary of the Army for Research, Development, and Acquisition, to direct a study of the issue by AMC.[161]

(U) The FAR supplement assessment team consisted of representatives from the headquarters and from the Armaments Research and Development Center, the Night Vision Electro-Optical Laboratory, the Industrial Base Engineering Activity, and Missile Command. PMs and prime contractors on selected weapon systems submitted impact statements. A survey of the domestic precision optical industry was planned to determine its capacity limits, surge and mobilization capability, and to survey its "purported loss of business to foreign competition in both DOD and commercial sectors." The team was to report by 1 January 1986.[162]

(U) Germanium Reclamation. In another move toward greater self-sufficiency, a tri-Service/Defense Logistics Agency (DLA) group was established to investigate the feasibility of Germanium reclamation. Germanium, a rare semimetallic element found primarily in Africa, had particular importance to military infrared detection devices. The multi-agency group was chaired by the Engineering and

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[159] Ibid.
[160] Ibid.
[161] Ibid.
[162] Ibid.

Production Support Division of the DCS for Production. DLA had other precious metals reclamation programs established, encompassing collection, reclamation, and issuance activities; a similar program appeared likely for Germanium.[163]

Diminishing Manufacturing Sources and Materials Shortages (U)

(U) A DOD program addressing the problem of nonavailability of parts, particularly micro-electronic/electronic components for equipment no longer state-of-the-art, was underway in FY85. The AMC Commander named Laboratory Command as AMC's lead for implementing the DOD program outlined in DOD Directive 4005.16, Diminishing Manufacturing Sources and Material Shortages (DMSMS), and in the similarly titled draft Army Regulation (AR 700-XX). The DCS for Production was given corporate control.[164]

(U) POCs were established in each of the subordinate commands. Working as an ad hoc group, the POCs were drafting implementing regulations that would seek to answer problems not only in the micro-electronics area, but--pursuant to concern of the AMC Commander--in all areas where loss of commercial markets, low volume of defense requirements, or other difficulties made continued production of critical components noneconomic or otherwise infeasible for the producer. The AMC regulations working title was Materials and Parts Availability Control.[165]

Defense Standardization and Specification Program (U)

(U) In FY85, AMC continued to exercise Army-wide responsibility for the broad-based DOD Defense Standardization and Specification Program (DSSP).[166] FY85 funding for AMC's DSSP program was $22.839 million, 1 percent below FY84 and 78 percent of the requested level. This provided approximately 381 man years of standardization efforts and $8.9 million in contracted services.[167]

(U) DOD Parts Control Program. The DSSP objective of promoting efficient use of resources was carried out through such activities as the Parts Control Program, formally established in AR 700-60 and MIL-STD 965, which promoted use of standardized parts in end items whenever feasible. On 12 December 1984, the Secretary of Defense

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[163] Ibid.
[164] Ibid.
[165] Ibid.
[166] AR 700-47.
[167] DCS for Production, FY85 AHR submission, HQ AMC.

issued a memorandum emphasizing the importance of assuring contractor compliance with the PCP objectives. Through the rest of the fiscal year, the memo formed the basis for revision of the PCP program documents. In AMC's reviews of new items of equipment received from contractors in FY85, 5,547 "nonpreferred" parts were counted; of these, it was determined that 2,090 could be replaced by parts that had been designated as preferred or standard for new design. Using DLA cost benefit techniques, cost avoidance of approximately $12 million was obtained by the PCP review.[168]

(U) DepSO-MIS. Under DepSO-MIS, or Departmental Standardization Office-Management Information Systems, AMC was automating DSSP functions. In FY85, it renewed a contract for a data base adminstrator who was to control format changes and computer inputs into the system.[169]

Data Management Program (U)

(U) Data Item Descriptions. Steps were taken during the year to discipline the collection and preparation of technical data information required from and needed in the production process. The DOD Data Item Descriptions, standard form prescriptions defining content and format of technical data reports required from contractors by Army developers, had been modified, augmented, replaced, and supplanted by locally developed Data Item Descriptions. Several complementary approaches were taken. Army proponents of some 318 non-standard, ad hoc recurring data item descriptions had been given one year to substantiate their need or to discontinue use of such standards. In FY84, 78 new Army-prepared Data Item Descriptions were added to the list of some 3,000 or so standard DOD Data Item Descriptions, use of the rest being prohibited. Also, as an amendment to AR 700-51, Army Data Management Program, modification of any of the approved DOD Data Item Descripitons via addendas, exhibits, attachments, or whatever was likewise prohibited. Finally, Army coordination of a Military Standard entitled "Preparation of Data Item Descriptions," DOD-STD-963, was accomplished. As a result of the coordiantion, 42 Army "essential" comments were forwarded to the OSD Preparing Activity for incorporation.[170]

(U) TDP Acquisition Policy. Sometimes nonexistent Technical Data Packages that would be required by manufacturers to enter production of developed materiel was a bottleneck attacked in FY84 by

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[168]Ibid.
[169]Ibid.
[170]Ibid.

revision of the AR70-1, Army Research, Development, and Acquisition, to require upfront pinpointing of where, when and what would be required in terms of TDPs as part of the overall acquisition strategy planning and funding process. The revision was forwarded to the DA proponent of the regulation for incorporation.[171]

Technical Information Management System (U)

(U) Technical Data/Configuration Management System (TM/CMS). Falling under the Technical Information Management System (TIMS) management umbrella in FY85, TD/CMS maintained its identity as a separate project. It was in the throes of system redesign to better meet the needs of the configuration management system. The primary efforts were with developing the functional description and refining the redesign objectives. TACOM led the work, assisted by the Automated Logistics Management Systems Activity (ALMSA).[172]

(U) Another item of note concerning TD/TCMS was its evaluation by the Air Force Sacramento Air Logistics Center for use in automating the Air Force engineering data repositories. Action was also underway to rewrite AMC's Configuration Management regulation, supplementary to that of the Joint Services'. By the end of FY85, the several MSCs had developed their comments on the project and work was to begin incorporating these into the revision.[173]

(U) Digital Storage and Retrieval Engineering Data System (DSREDS). Also brought under TIMS, the DSREDS effort to develop automated engineering data repositories for both the Army and the Air Force continued as a joint effort. The prime contractor, AT&T, was to provide one system for each Service with options for six additional Army systems and four additional Air Force systems. Significant progress was made during the year, although the contractor experienced delays in software development and some component deliveries. The scheduled delivery of the first system to MICOM slipped from December 1985 to April 1986 as a result. This also delayed decision on implementing options for additional systems.[174]

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[171] Ibid.
[172] Ibid.
[173] Ibid.
[174] Ibid.

Value Engineering (VE) (U)

(U) Emphasis on the Value Engineering program in FY85 as the most promising arena for reducing production costs saw identified savings nearly double over the prior fiscal year. Through in-house and contractor improvement proposals, some $373.3 million was saved in FY84. The savings in production costs for FY85 was $667.2 million. During the year, AMC rceived 664 Value Engineering Change Proposals (VECP) from contractors, approved 285, and made financial settlements on 333, with $167.1 million in identified cost avoidance and savings over the first three years of the change. AMC's in-house program resulted in 540 verified and validated proposals with savings of $203.3 million in the first year and $296.8 million in the next two years.[175]

Training (U)

(FOUO) In March 1985 the CG reported to the Chief of Staff of the Army on several new training programs for production engineers. To alleviate the problems resulting from the little actual manufacturing experience among AMC production engineers, a Training With Industry (TWI) program was established. Under the program, AMC engineers would train for approximately 12 months with a manufacturer. As of March, four AMC engineers had been selected for such assignment. In the Advanced Manufacturing Engineering Studies Program, an engineer would take 12 months for full-time graduate-level program concentrating on manufacturing/production engineering at such institutions as the University of Michigan, University of Massachusetts, Massachusetts Institute of Technology, Boston University, and Lehigh University. As of March, one engineer had been selected for that program.[176]

Contract Administration (U)

(U) Contractual Performance Shortfalls. In October 1984, the CG, AMC asked his MSC Commanders to send quarterly reports on all contractual performance shortfalls on weapon systems covered by the Project Management Control System (PMCS). In March 1985, the MSC's top ten contracts other than those covered by the MPMCS were added to the reporting requirement. DCS Production prepared a feedback report to the MSCs in order to provide consistency in analyzing and tracking the corrections of the shortfalls and in providing guidance on them to the MSCs. The

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[175] Ibid.

[176] Ltr (FOUO), General Thompson to General John A. Wickham, Jr. [Monthly Letter], 11 March 1985.

feedback reports analyzed the contractual shortfalls in terms of causes and remedies, shortfalls corrected and added, and progress in correcting shortfalls, including each command's trend, conclusions, and follow-on actions.[177]

(U) Contractors Requiring Special Attention. AMC developed the Contractors Requiring Special Attention Program to intensively manage poorly performing contractors. The program was designed as an improvement program, not to be used in a punitive manner, although debarment was possible. Specifically, once a poorly performing contractor was placed on the program by notification from the head of contracting activity, working in coordination with the Defense Contract Administration Service, it would have to submit an action plan for improvement and would be intensively monitored for a six-month period to resolve problem areas. Where the contractors fail to respond to this effort, they are referred to HQ AMC for further action, possibly disbarment. Lists of CRSAs submitted by MSCs to HQ AMC are combined into a master and distributed to all MSCs.

(U) Production Review Integrated Database. During FY85, the DCS for Production began development of of the Production Review Integrated Database (PRIDE) to establish a system for integrating and tracking corrective actions required of contractors and developing the specific performance indicator data that would permit trend analysis for early identification of problem areas. PRIDE was to be implemented on Boeing Computer Services' Copper Impact Network in two phases. The first, scheduled for completion in January 1986, would establish a corrective action database called ARCADE (Audits, Reviews and Corrective Actions Database) that would allow managers to integrate and track all corrective actions. Phase 2 was to be completed in March 1986, an integration of specific performance indicators and trend analysis into the database.[178]

Industrial Preparedness Planning (U)

(U) One of the more significant developments in the materiel acquisition area in FY85, Industrial Preparedness Planning (IPP) took a new approach. Previously, producers filled out a direct planning agreement (DD Form 1519) to provide information on surge and mobilization capability. These forms became the source of the

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[177] Ibid. For more on the PMCS, see the DEA section of this chapter, above.

[178] Ibid.

overall industry capability assessment. Although a DOD system,[179] only the Army and DLA used it to any significant extent, leaving major gaps that rendered an accurate overall base capability assessment impossible. This problem compounded two other deficiencies in the way the system worked. Normally, there was no vertical planning beyond the prime or first sub-tier contractor, making the collected data suspect. Secondly, since little attention was actually paid to the data, there was a corresponding decline in its quality.[180]

(U) When these problems surfaced at the Under Secretary level, a moratorium was placed on use of the system until a full study was made. AMC then surveyed the data on the forms to determine the extent of the quality problem. The survey showed that 40 percent of the completed forms had inaccuracies significant enough to render the data unusable. The root cause of the inaccuaracies was determined to be the lack of emphasis on mobilization planning within AMC and DOD in general. AMC's study of the overall IPP system was implemented by a literature search of "the multitude of past studies done on the same subject; and by discussions with personnel throughout DOD who were responsible for implementing the program. The major findings of the study were that the present system could not capture the total base capability, that IPP was conducted outside of and behind the equipment acquisisiton process, that industry's involvement in IPP was minimal, and that the base capability assessment had no impact on the strategy which dictated materiel requirements during mobilization.[181]

(U) AMC devised a revised planning scheme drawing from what it had learned and with the object of taking a logical and practical approach to IPP. Instead of first obtaining detailed information from industry and using it to determine the industrial base, an attempt was first made to obtain, by macro analysis, a picture of the industrial base capability to meet DOD mobilization demands. Base capability shortfalls highlighted by this process would be further analyzed by sector studies of particular areas to determine which required attention at the DOD level. Then, attention was directed toward specific items uniquely critical to Army, analyzing fewer items but analyzing in greater depth than in the past, involving the PM in the planning, and bringing these surge/mobilization factors into the picture when setting the acquisition strategy for a new weapon system.[182]

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[179] DOD Instruction 4005.3.
[180] DCS for Production, FY85 AHR submission, HQ AMC.
[181] Ibid.
[182] Ibid.

(U) Another facet of the new system was establishment of an Industrial Preparedness Steering Group whose membership encompassed all key players in IPP. For the first time, representatives of industry and those agencies (other Services, ODCSOPS, etc.) who set the requirements that must be planned for were brought early on into the planning process. AMC and other represented agencies with input in industrial base assessment--Labor, Commerce, Defense (Office of the Undersecretary of Defense for Readiness), and the Federal Emergency Management Agency--thus obtained industry input as to the manner in which its base was assessed and possible solutions to capability shortfalls and "closed the loop" with the strategists whose requirements drove IPP efforts.[183]

(U) The CG, AMC approved the new approach on 12 October 1985, and the Assistant Secretary of the Army for Research, Development and Acquisition signed off on the program five days later.[184]

(FOUO) Training. In March 1985, the CG reported to the Chief of Staff of the Army on several new training programs for production engineers. To alleviate those problems resulting from most AMC production engineers having had "little actual manufacturing experience," the manufacturing Training With Industry (TWI) program had been established. Under this program, the AMC engineers would train for approximately 12 months with a manufacturer. As of March, four AMC engineers had been selected for TWI assignments.

(U) In another program, the Advanced Manufacturing Engineering Studies program, an engineer could take a year off for full-time graduate level program concentrating on manuracturing/production engineering at such universities as the University of Michigan, the University of Massachusetts, MIT, Boston University, and Lehigh University. As of March, one engineer had been selected for the program.[185]

Office of Small and Disadvantaged Business Utilization (U)

(U) During FY85 AMC was fairly successful in meeting its goals in the area of small and disadvantaged businesses with only two goals, that for Small-Business Set Asides and that for Women-Owned Business failing to meet their goal. Of the total US business.

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[183] Ibid.

[184] Ibid.

[185] Ltr, (FOUO), GEN Thompson to GEN John A. Wickham, Jr. (monthly letter), 11 Mar 85.

dollars spent, AMC awarded 15.1 percent ($3,512M) to small business. This was $437 million more than was awarded in FY84, itself an improvement from previous years, and slightly bettered the AMC goal of 15 percent. AMC awarded only 4.9 percent of its business dollars under Small Business Set-aside procedures, substantially less than its goal of 8.5 percent. AMC awarded $391.1 million to Small Disadvantaged Businesses, including both direct awards and Section 8(a) awards to the Small Business Administration, exceeding its goal of $380.5 million. Under the small business subcontracting category were the subcontracts let by prime contractors to small and disadvantaged businesses. AMC prime contractors let 32 percent of their subcontracting dollars to such businesses, exceeding the AMC goal of 26.9 percent by more than 6 percentage points. AMC continued to make significant improvements in the area of Research and Development contracts to small and disadvantaged business, increasing the dollar amount spent over FY84 from $207.98 million to $256.96 million. Calculated as a percentage of awards, this was an increase from FY84 of 12.6 percent to 13.6 percent, and far exceeded the goal of 8.5 percent. The Small Business Innovative Research Program doubled in both research dollars and number of contracts in FY85, with AMC offices having made 142 contracts totalling $12.5 million under this program. Most of this was for exploratory development or technology base areas of the research cycle. Noteworthy contracts in this area include two successful contracts in the areas of Robotics (field material handling and artificial intelligence), the development of a lightweight air conditioning system to cool a chemically treated "spacesuit" worn by a soldier in a tank, and a high technology Reverse Osmosis Unit used for water purification

(U) With a full staff in FY85, the Small Business Office was able to assume a "more proactive posture" in FY85. This included sending two significant guidance letters to field activities covering such topics as the requirements for using the Small and Disadvantaged Business subcontracting clause, AMC's small business policy, views on small business expressed at congressional hearings, and recommendations to improve performance in this area. Staff visits and communication/coordination with field units also significantly improved in FY85.

(U) One area in which there was a major increase in workload was in appeals of Certificates of Competency. These certificates were issued by the Small Business Administration on the request of a firm after the firm was found not to be responsible by the contracting official. In essence, it is a statement by the SBA that the firm is capable of doing the work required by the contract. Although the certificate is normally conclusive, there were provisions in the law for the contracting official to appeal it through AMC and the Army to

the Administrator of the SBA, who makes the final decision. Workload was up in this area for two reasons. One was that Public Law 95-577, passed in FY84 but effective in FY85, removed a previous exemption that removed simplified procurements from this appeal procedures. The other was that AMC took a firmer stance in regard to prompt contractor performance. As a result, appeals were increased from an estimated 6 to 8 per year previously, to over 30 in just the last quarter of FY85.

(U) One of the major outreach tools for the Office of Small and Disadvantged Business Utilization were Industry Conferences, both those co-sponsored by DOD and the Department of Commerce and those sponsored by a variety of other sources including business associations, other government agencies, and members of Congress. In FY85, the Office of Small and Disadvantged Business Utilization required records be kept on such conferences. As a result, it was found that AMC personnel participated in 283 conferences, 262 of which were other than the official DOD Department of Commerce sponsored conferences. AMC provided an overall total of 303 counselors at these conferences, for an estimated two mandays per conference, and provided an opportunity for an estimated 70,000 business people to obtain information on doing business with AMC and the Army. Among the conferences in which AMC participated was the "West Virginia Initiative." This included a 4 April 1985 West Virginia Defense Fair sponsored by Senator Robert Byrd and organized by the American Defense Preparedness Association, a 1 July 1985 "Software Valley, West Virginia in Morgantown, and a 9 September 1985 West Virginia Facilities Development Day" held at the Russell Senate Office Building in Washington, DC, and again sponsored by Senator Byrd.[186]

DCS for Intelligence (U)

(FOUO) Within the DCS for Intelligence, the Technology Loss Control Division was established to be "responsible for all International Technology Transfer (IT^2) control functions within AMC." Subsequently, points of contact for the division were established at all MSCs and laboratories. A regulation on IT^2 control was drafted. The division's primary emphasis was on developing a technical assessment of Army weapon systems and identifying militarily critical technologies inherent in Army R&D efforts. These assessments, after validation by HQDA, would be used to establish policy guidance on the export, sale, and/or

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[186]Office of Small and Disadvantaged Business, FY85 AHR submission.

co-production of these systems to ensure that critical technologies were not inadvertently exported. AMC contracted with the Los Alamos National Laboratories to prepare the assessments.

(U) Near the end of the fiscal year, 58 weapons and 118 technologies "were under review for the identification of embedded critical technologies." The review of two of these 58 weapon systems, those of the M1A1 tank and the Single Channel Ground and Airborne Radio, were completed and then forwarded to HQDA for validation. Through FY85 AMC expended $1 million on this program, and the DCS for Intelligence requested an additional $2 million per year for the program. A request had also been made to HQDA, Office of the Assistant Chief of Staff for Intelligence (OACSI) that AMC be assigned as the Executive Agent for Technology Security.[187]

(U) The Command established a Threat Evaluation Division within the DCS for Intelligence in order to provide tailored and focused threat guidance to the MSCs that would be used in the development of technology base programs and in system concept formulation efforts. This would ensure that AMC's efforts "are based on the threat and permit initial assessment of . . . relative worth in a Theater-wide scenario."[188]

(U) In another move that would assist AMC's R&D efforts, the DCS for Intelligence assumed control of the US Army Scientific and Technical Information Team-Far East and the US Army Scientific and Technical Information Team-Europe (STITEUR) after their previous higher headquarters, AMC's US Army Foreign Science and Technology Center (FSTC), became part of the new Army Intelligence Agency (AIA). Maintenance of AMC control over the two Science and Technology Centers was considered necessary to enhance the close linkage and interface between AMC RDTE elements and the overseas information gathering arms of AMC.[189]

(U) The transfer of FSTC also resulted in the DCS for Intelligence acquiring complete management responsibilities for Program D650, Evaluation of Foreign Items. The program identified and reverse engineered promising foreign equipment to acquire advanced technologies and shorten the acquisition cycle. The budget for this program had been approximately $3 million annually for the

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[187]DCS for Intelligence, FY85 AHR submission. Ltr (FOUO), General Thompson to General John A. Wickham, Jr. [monthly letter], 5 Sep 85. Quotation from letter.

[188]DCS for Intelligence, FY85 AHR submission.

[189]Ibid. Cf. Command Management chapter, this AHR.

past several years. It was anticipated that more intensive management and a "push" from top level management at AMC would result in an increase over the next several years.[190]

(U) In another intelligence area, the opening of a dialog between AMC and the Defense Intelligence Agency offered a "real prospect of moving human intelligence into the high technology arena for the first time."[191]

(U) The DCS for Intelligence also played a role in internal security efforts within AMC. In an effort to improve Operations Security (OPSEC) throughout the command by providing clear information on what must be done to protect against hostile exploitation, AMC schools added OPSEC instruction with an eventual goal of making OPSEC an integral part of each course. Also an OPSEC review of all AMC training manuals was being undertaken in order to "eliminate gratuitous sensitive unclassified information from such publications and provide only what is actually needed by the soldier in performance of his duties."[192]

(U) In addition, in July 1985, responsibility for the automation security program was transferred from the DCS for Information Management to the DCS for Intelligence. Among the first developments, the Tiger Team program was restructured and an SOP developed for the program, the basic thrust of which remained attempted penetration of AMC-unique automation facilities by functional experts in hardware, software, and security. By November 1984, efforts were underway to establish at the MSCs Centers of Excellence for various aspects of computer security. These included centers for software, security and encryption standards, personnel surety and security, hardware and physical security, and input/output controls. Later in the year plans were also laid for a center for network security. Other ongoing automation security programs included accreditation of Regency Net, revision of inspection guidelines, and the development of security policies for embedded computer systems, systems which were integral to items of equipment.[193]

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[190] DCS for Intelligence, FY85 AHR submission.

[191] Ibid.

[192] Ibid.

[193] Ibid. For information on Tiger Teams and Centers of Excellence, see also Ltr, (FOUO), General Thompson to General John A. Wickham, Jr. [monthly letter], 8 Nov 84. For information on Regency Net, see PM chapter, this AHR.

CHAPTER IV

PROJECT MANAGEMENT (U)

(U) In October 1984 at the beginning of FY85, the US Army Materiel Command listed seventy separate product, program or project manager programs within its organization. These programs, established to bring various weapon systems and other materiel into being, vested the product, program, or project manager with authority to cut across organizational lines and to use any of the resources of AMC to accomplish his mission. This method was initiated in order to expedite the acquisition process. These programs have been a constantly evolving institution of the Command since its inception. The matrix management system allowed a flexibility of approach tailored to the development and acquisition problems associated with each particular program, product or commodity.

(U) During FY85 steps were taken to improve the PM Program by providing for more flexibility in staffing and establishing a program by which PMs would be terminated when their specialized capacity for bringing major systems into operation was no longer required. Due to the continued force modernization effort, however, numbers grew. Fifty-four of the seventy PMs in existence at the beginning of the year had formal charters, while sixteen were still in a provisional status. During the year, nine more PMs were provisionally established and eleven provisional PMs received formal charters; thus, the list of chartered PMs grew to sixty-five and the number of provisional PMs dipped to fourteen.

(U) In most instances the PMs reported to the commander of a major subordinate command, although a few reported directly to HQ AMC. The Office of Project Management (AMCPM) continued to exercise staff responsibility for the PM programs.

Chartered PMs as of October 1984 (U)

PM	Command
AAH (Advanced Attack Helicopter)	HQ AMC
TADS/PNVS (Target Acquisition Designation System/Pilot Night Vision System)	HQ AMC
ASH (Advanced Scout Helicopter)	AVSCOM
ACVT (Armored Combat Vehicle Technology)	TACOM
ADCCS (Air Defense Command and Control System)	MICOM
AWC (Amphibians and Watercraft)	TROSCOM

ASE (Aircraft Survivability Equipment)	AVSCOM
ASH (Army Helicopter Improvement Program)	AVSCOM
ATC (Army Tactical Communications Systems (ATACS))	CECOM
BFVS (Bradley Fighting Vehicle System)	TACOM
Black Hawk	AVSCOM
CAWS (Cannon Artillery Weapon Systems/JPM Guided Projectiles)	AMCCOM
CH-47 Modernization Program	AVSCOM
Chaparral/FARR	MICOM
Cobra	AVSCOM
CCE/SMHE (Commercial Construction Equipment and Selected Material Handling Equipment)	TACOM
Defense Communications Systems (Army)	HQ AMC
DIVAD (Division Air Defense Gun)	AMCCOM
FATDS (Field Artillery Tactical Data Systems)	CECOM
Firefinder/REMBASS	CECOM
Hawk	MICOM
Hellfire/GLD (Hellfire/Ground Laser Designators)	MICOM
HET (Heavy Equipment Transporter)	TACOM
LAV (Light Armored Vehicle)	TACOM
ACE (M9/Armored Combat Earthmover)	TACOM
M113 Family of Vehicles	TACOM
MEP (Mobile Electric Power)	TROSCOM
MICNS (Modular Integrated Communication and Navigation System)	ERADCOM
MLRS (Multiple Launch Rocket System)	MICOM
MSCS (Multi-Service Communications Systems)	CECOM

9mm Pistol Program	AMCCOM
Nuclear Munitions	HQ AMC
OPTADS (Operations Tactical Data Systems)	CECOM
Patriot	MICOM
Pershing	MICOM
PLRS/TIDS (Position Location Reporting System/ Tactical Information Distribution Systems)	CECOM
PSE (Physical Security Equipment)	TROSCOM
SANG (Saudi Arabian National Guard Modernization Program)	USASAC
Satellite Communications	CECOM
SEMA (Special Electronic Mission Aircraft)	AVSCOM
SINCGARS (Single Channel Ground and Airborne Radio Subsystem)	CECOM
SMOKE/Obscurants	AMCCOM
Stinger	MICOM
Tactical Airborne Remotely Piloted Vehicle/ Drone System (RPV)	AVSCOM
*M1 Abrams Tank System	TACOM
*Tank Main Armament System (TMAS)	TACOM
*M60 Tanks	TACOM
TMDE (Test, Measurement and Diagnostic Equipment)	CECOM
ATSS (Automatic Test Support Systems)	CECOM
TMDOD (TMDE Modernization)	CECOM
TOW	MICOM
TRADE (Training Devices)	HQ AMC

ARD (Armor Training Devices)	HQ AMC
US Roland	MICOM

PMs followed by indented entries were capstone PMs to which the indented PM were subordinate.
* These were subordinate to PM Tanks (Provisional).

Source: AMCPM Listing

(U) Of the three types of PMs, the offices of program and project managers were created and chartered by the Secretary of the Army, the program manager being further distinguished by having PMs subordinate to it, although both program and project managers were colonels or general officers. A product manager, on the other hand, was created and chartered by the Commander of AMC and was usually a colonel or a lieutenant colonel. Two product managers appointed over PM offices established during the fiscal year were GS-15 civilians, a first in the command's history.

(U) Of the twenty-five PMs in provisional existence at some point during FY85, eight were product managers, twelve were project managers, and five were program managers. Of those created during the year, five were product managers and therefore established by the AMC command, three were project managers, and one, the PM for Air Defense Systems, was a program manager.

Provisional PMs, FY85 (U)

PM	Date Provisionally Established	Date Formally Chartered	Command
Project Manager, Ammunition Logistics	9 Apr 84	21 Jun 85	AMCCOM
Project Manager, Advanced Man-portable Weapon Systems	12 Dec 83		MICOM
Program Manager, Air Defense Systems	9 Apr 85		MICOM
*Product Manager, Apache Automatic Test Equipment	2 Jul 84	15 Nov 85	HQ AMC
*Product Manager, Army Communications Systems	5 Sep 85		HQ AMC
Army Tactical Missile System	10 Mar 83		MICOM

Product Manager, Aviation Life Support Equipment	11 Apr 85	22 Nov 85	AVSCOM
**Product Manager, Aviation Training Devices	27 Mar 84	29 Mar 85	HQ AMC
Project Manager, Clothing and Individual Equipment	8 Nov 84	28 Aug 85	TROSCOM
Product Manager, Ground Forces	27 Mar 84		HQ AMC
Training Devices			
Program Manager, Light Combat Vehicles	29 Aug 84		TACOM
Project Manager, Light Helicopter Family	6 Aug 84	28 Mar 85	AVSCOM
Project Manager, Mines, Countermines and Demolitions	5 Oct 84	11 Jun 85	AMCCOM
Project Manager, Mobile Protected Gun System	12 Dec 83		TACOM
Product Manager, Mortar Systems	28 Aug 85		AMCCOM
Product Manager, Night Vision Devices	24 May 85	12 Oct 85	CECOM
Project Manager, Petroleum and Water Systems	16 Aug 84		TROSCOM
Program Manager, Tactical Intelligence/Electronic Warfare System	5 Dec 85		ERADCOM
Program Manager, Tactical Vehicles	19 Dec 83	18 Jan 85	TACOM
Project Manager, Heavy Tactical Vehicles	19 Dec 83	18 Jan 85	TACOM
Project Manager Medium Tactical Vehicles	19 Dec 83	18 Jan 85	TACOM

Project Manager Light Tactical Vehicles	19 Dec 83	18 Jan 85	TACOM
***Program Manager, Tank Systems	9 Jan 84	23 Jan 85	TACOM
Product Manager, Test Program Sets	20 Dec 84	21 Oct 85	CECOM
Product Manager, Topographical Support Systems	13 Nov 84	28 May 85	TROSCOM

Notes:
* Subordinate to PM Advanced Attack Helicopter
** Subordinate to PM Training Devices
*** Has subordinate PMs for the M1 Abrams Tank, Tank Main Armament System, and M60 tank.

Sources: Office of Project Management AHR input for FY85 and Provisional PM list from AMCOM.

(U) Two PMs had their reporting channels changed during FY85. On 26 August 1985 Tactical Airborne Remotely Piloted Vehicle/Drone System was changed from AVSCOM to MICOM. On 28 August 1985 PM, Modular Integrated Communications and Navigation System was changed from ERADCOM to PM, Tactical Airborne Remotely Piloted Vehicle/Drone System. PM, Joint Tactical Missile System, a combined Army and Air Force effort, reverted to PM, Army Tactical Missile System when the Air Force dropped its support for the system.

(U) Although no PMs were abolished in FY85, AMC did develop a policy and program to terminate PMs after they were no longer needed. Stressing the high cost of PM management and the need to limit it to high priority programs and to prevent it from becoming the customary method of conducting business, General Thompson, in a 23 April letter set forth the guidelines for terminating PMs. The sole criterion for deciding to terminate a PM and transfer control over its program to a commodity command was to be the "achievement of . . . initial operational capability (IOC)" for the system or systems controlled by that PM. This policy was to apply to transition of individual systems to commodity command control even if the PM office continued to exist to control other systems; however, an annual review would determine if the remaining systems were significant enough to warrant the continuance of the PM office.

(U) Attainment of IOC was to be determined by fourteen indicators. Once the initial phase of fielding was completed these indicators were to be reviewed, and those "not satisfied will be addressed as quickly as possible to expedite the transition of the system/item." Then, following the approval of the PM's transition plan

by HQDA, or HQ AMC if it were the chartering agency, the responsibilities, assets, and personnel would be redistributed to an MSC. If the PM then had no other assignments, it would be terminated.

(U) This program was to be tested by the PM responsible for the AN/TPQ-36 Mortar Locating Radar (Firefinder) and the AN/TPQ-37 Artillery Locating Radar (REMBASS), which systems had reached IOC in the field in the third quarter of FY83 and the first quarter of FY81 respectively.[1] In FY85, eight separate system transition plans and four PM office termination plans were submitted to HQ AMC.

PM Termination Indicators (U)

Acceptable Safety Record

Technical Data Package Verified as Complete

System Mission Capable Rates Meets DA Standards

DSARC/ASARC/IPR--No Major Open Items From Last Review

Field Performance Requirements Met

Production Lines--No Major Problems--Smooth Production

Political Issues Satisfactorily Resolved

Life Cycle Plan in Place--Program Being Executed Well

Fielding Cycle Plan in Place--Major Fielding Completed

Training Equipment Certified and Working Well

TMDE Successfully Tested

Technical Risk Management at Lower Management Level

Quality Assurance Program Acceptable

Safety Cognizance

Source: Enclosure to Ltr, General Richard H. Thompson to Major General Robert D. Morgan, 23 Apr 85.

[1] Ltr, General Richard H. Thompson to Major General Robert Morgan, 23 Apr 85 and ltr, Office of PM to Distribution, subj: Project Management (PM) System/Item Termination Criteria and PM Office Termination Policy, 23 Jul 85.

(U) In FY85, first in August during an annual PM Conference and then in a September letter from the AMC Commander to the Commanders of the MSCs and to the PMs, the command initiated a policy of stressing the use of matrix management for PMs in order to insure the most flexible and efficient system possible. General Thompson stressed that with matrix management the role of the PM was not to execute the program but to integrate and manage the activities associated with the program. The actual accomplishment, the "doing" of the program was "accomplished by functional specialists external to the Project Manager Office (PMO), but over whom the PM has tasking authority." Items to be considered in structuring a PM program included whether there should be a dedicated cell of functional elements physically located with the PM or designated people in functional elements who were to be responsible, by name, to the PM. Other considerations included the participation of the functional elements in the PM's review and analysis, and vice versa, and the PM's input to the performance appraisals of the personnel in the functional elements who were tasked by that PM.[2]

(U) To improve the flexibility of the PM program by facilitating the movement of personnel into and out of the PM's Office, General Thompson directed that the TDAs for the PMs be cancelled, and the spaces transferred to the MSCs. Personnel would then be provided to the PM by the MSC on either a full-time basis or as required, as determined jointly by the PM and the MSC commander. Dedicated teams of personnel from the MSC's functional elements could be delegated to work on-site with the PM during work surges. "This action coupled with the detailing of personnel and the use of term appointments, which would permit one high grade space to satisfy different skill requirements, would increase resource flexibility over the system's life cycle." As indicated by the above quotation from General Thompson's September letter, even the dedicated core of full-time on-site personnel was expected to change in composition over the course of time, with the core being at first heavy with design and producibility engineers and development test experts, while later in the developmental cycle the "core composition should shift toward configuration management, production engineering and quality assurance expertise." Integrated logistics support personnel, however, would be needed throughout the cycle.[3]

(U) An innovation in PM management in AMC was the selection for the first time in AMC history of civilians to head PM offices. Mr. Jerry L. Wilson (GS-15) became the product manager of the Topographical Support Systems PMO, which was established in November 1984, while Mr. Kenneth S. Solinsky (GS-15) became the product manager of the PMO for Night Vision Devices, established in May 1985.

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[2] Ltr, General Richard H. Thompson to Major General Fred Hissong, Jr., et al, subj: Project Management Policy, 11 Sep 85 and PM Office input for the AHR, FY85.

[3] Ibid.

(U) In FY85, 140 Army students graduated from the 19 week Program Management Course given by the Defense systems Management College. In the course of the fiscal year the VCSA mandated that all PM designees who had not already taken that course would do so before becoming a PM, and seven PM designees were programmed to graduate from that course in December 1985.

Specific PM Programs (U)

(U) Although most PMs reported to MSC Commanders, ten provisional and chartered PMs reported directly to Headquarters, AMC.[4]

PMs Reporting to HQ AMC

Advanced Attack Helicopter
- Target Acquisition Designation System/Pilot Night Vision System
- Apache Automatic Test Equipment

Army Information Systems
Nuclear Munitions
Training Devices (TRADE)
- Armor Training Devices
- Army Communicative Systems
- Aviation Training Devices
- Ground Forces Training Devices

Source: Army Project Management List, 1 December 1985

(U) FY85 activities of PM TRADE, its subordinate PMs, and PM Army Information Systems are discussed in this chapter. PM Nuclear Munitions will be covered in the Materiel Acquisition chapter as part of the discussion of the DCS for Chemical and Nuclear Matters. The Advanced Attack Helicopter PMs will be covered in the AVSCOM AHR. In addition, PM SANG will be covered in the USASAC portion of this AHR.[5]

PM TRADE (U)

(U) PM TRADE, operating through four subordinate PMs, was responsible for managing the acquisition of training devices for the Army. In FY85 it was responsible for delivering to the Army 49 different types of training devices and simulators totaling 13,065 items worth $258.7 million.

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4 PM Office input for AHR, FY85 and AMC Program/Project/Product Manager roster as of 24 Oct 85.

5 Activities of the PMs reporting to MSCs are left to discussion within their historical profiles.

PM TRADE Devices Fielding in FY85

Device	Quantity Fielded
AH1 Flight/Weapons Simulator	4
M1 Conduct of Fire Trainer (COFT)	30
M2/3 Conduct of Fire Trainer (COFT)	16
M60A3 Conduct of Fire Trainer (COFT)	4
M1 Trainer Turret Organizational Maintenance Trainer	9
M1 Turret Organizational Maintenance Trainer	8
M1 Hull Electric Computer Maintenance Trainer Panels	7
M1 Transmission Maintenance Trainer Panels	13
M1 Engine Maintenance Trainer Panels	13
M1 Ballistic Computer Maintenance Trainer Panels	4
M1 Turret Electric and Hydraulic Maintenance Trainer Panels	4
M1 MILES	516
M2/3 MILES	451
Air Ground Engagement/Air Defense (AGES/AD) I	
UH 1	221
OH 58	327
AH 1	476
Vulcan (SP)	172
Vulcan (TOW)	66
Chaparral	201
Stinger	211
M21 Blank Firing Attachment	7,859
Gunfire Simulator (GUFS)	1,703
Tactical Vehicle Maintenance Troubleshooting Trainer (TVMTT)	43
Armor Moving Target Carrier	11

Collision Avoidance Radar Navigation Systems Trainer (CARNS)	1
CH-47D Electrical System Trainer, DVC 01-46	1
AH-1S Helicopter Installed Television Monitor and Recorder (MITMORE), DVC 01-135	6
Truck Driver Trainer, DVC 55-19	4
UH-60A Black Hawk Electrical Systems Trainer DVC 01-116/1 (Classroom)	1
UH-60A Black Hawk Hydraulic Systems Trainer DVC 10-116/2 (Classroom)	1
UH-60A Black Hawk Power Train Trainer DVC 01-116/3 (Classroom)	1
UH-60A Black Hawk Electrical Systems Trainer, DVC 01-117-2	6
UH-60A Black Hawk Power Train Trainer, DVC 01-117/2	6
Diesel Engine Trainer, DVC 55-18	16
Hoffman (WESS) Tanks Gunfire Simulator	287
Medium Girder Bridge & Link Reinforcement Sets, DVC 05-19	5 (sets) 6 (links)
Aerial Radiological Survey Training Kit, DVC 03-03	21
Night Vision Shadow Projector, DVC 20-03	4
Portable Remote Control Demo Firing Console	8
Artillery, Mine and Demolition Noise Simulator	42
Small Arms Gunfire Simulator, DVC 07-22D	39
M-16A1 Rifle Mock-Up 2:1 Scale, DVC 09-19	170
Remedial Rifle Marksmanship Trainer (Weaponeer), DVC 07-57	66

CH-47D/T-55-L-712 Turbine Engine Trainer,
DVC 01-91 1

Source: PM TRADE AHR input, FY85

(U) In addition, contracts were let through PM TRADE's Logistics Management Branch to modify or reprocure the AH-1S Armament Procedures Trainer, DVC 01-34; the Artillery, Mine and Demolition Noise Simulator, DVC 6-19C; the Small Arms Flash, Noise Simulator, DVC 7-22D; the M16A1 Rifle Mock-up, 2:1 scale, DVC 09-19; the OV-1D Electrical Systems and A/C Instrument Trainer, DVC 01-08; and the Radar (Target) Operator Training Complex.

(U) Other actions accomplished included the development of integrated logistic support plans (ILSPs) for Guard Fist II, Laser Target Interface Device (LTID), Combined Artillery/Aviation Simulator (CAAS), Aviation Combined Arms Team Trainer (ACATT), Simulation of Area Weapons Effects Indirect Fire (SAWE-IF), and Simulation of Area Weapons Effects Mine Effects Simulation (SAWE-MES).

(U) Basis of Issue Feeder Data and Quantitative and Qualitative Personnel Requirements information was obtained for the Through Sight Video, Scaled Range Target System, Mobile Conduct of Fire Trainers (MCOFT), Air Ground Engagement Systems II (AGES), Remotely Piloted Vehicle (RPV) Institutional Trainer, Multiple Object Locator System, Army Training Battle Simulation System (ARTBASS), Signal Intelligence/Electronic Warfare (SIGINT/EW) Equipment Operator Simulator (SEOS), LTID, CAAS, SAWE-IF, and SAWE-MES.

(U) Materiel Fielding Plans (MFP) were developed on the Video Disc Gunnery System, RADIAC Set Trainer, M2/3 Maintenance Trainers, CH-47D Maintenance Trainers, LTID, MCOFT, and the ARTBASS. Fielding support was supplied for the M1/M2 Unit Conduct of Fire Trainers, AH-1S Flight Weapon Simulator, M1 Maintenance Trainer, CH-47D Maintenance Trainers, Collision Avoidance Radar/Navigation System (CARNS), and the Firefinder Organization Maintenance Trainer.

(U) The following systems obtained materiel release in FY85: M1 UCOFT (conditional release on 16 January 1985 and full release on 23 May 1985), M1/M3 UCOFT (5 April 1985), M60A3 UCOFT (30 September 1985), M1 ICOFT (30 April 1985), Truck Driver Trainer (19 July 1985), and UH-60 Black Hawk Part Task Panel Trainers (18 August 1985).

(U) In addition, the LTID was type classified, a system support package was developed for the MCOFT, a transition plan was developed for the fire finder trainer, and an SOP was developed for the implementation of the Manpower and Personnel Integration (MANPRINT) program.

(U) A six-month in-depth review of the Conduct of Fire Trainer coordinated by PM TRADE's Configuration Management Branch with Armaments, Munitions, and Chemical Command (AMCCOM) led to a 30 September 1985 sign-off on its technical data package and to the system's 1 October 1985 transition to AMCCOM for technical support. Deliverable drawings of the Remoted Target System/Armor Moving Target Carrier (RETS/AMTC) were reviewed by PM TRADE and AMCCOM and signed off on 9 August 1985, with transition of the system to AMCCOM occurring on 9 August 1985. A physical configuration audit of the AH-1 was conducted as was a preshipment configuration inspection of the AH-64.

(U) In PM TRADE the product assurance and test effort for the concept phase were to be accomplished primarily through use of a contractor. As a result, in FY85 the Product Assurance and Test Management Branch contracted with SAIC for provision of this support.

Funding (U)

(U) Overall, PM TRADE was funded for slightly under $500 million for FY85. It achieved an obligation rate of 96.1 percent for mission RDTE and of 77.9 percent for mission procurement.

PM Army Communicative Systems (Provisional) (U)

(U) In FY85 PM Army Communicative Systems was provisionally established under PM TRADE. It existed previously as Army Communicative Technology Office located under the Army Chief of Staff (HQDACS).

PM Aviation Training Devices (U)

(U) PM Aviation Training Devices was chartered on 29 March 1985, a year and two days after its initial creation, to manage the research, development and acquisition of the Synthetic Flight Training System (SFTS) and to provide assistance as required to other PMs on aviation-related training devices. In FY85, SFTS activities saw delivery of three AH1S (Modernized Cobra) flight simulators--one each to Fort Campbell, Kentucky; Illesheim, Germany and Fort Lewis, Washington. These devices, with an average cost of $16 million, provided field units a tool to improve training in crew coordination procedures, normal and emergency aircraft handling procedures, and gunner/tactical operations. Development of the prototype AH-64 (Apache) Combat Mission Simulator continued with the integration of hardware and software and with preliminary pilot evaluations. Production of two CH-47D (Chinook) flight simulators continued, and delivery was scheduled for FY86. Contracts were let in FY85 for the upgrade of two existing CH-47 flight simulators, for fifteen UH-60A flight simulators in a multi-year contract, for six AH-64A combat mission simulators in another multi-year contract, and for three AH1S flight and weapons simulators.

(U) The PMO implemented three value engineering (VE) proposals which would save approximately $1.3 million during the year. It also placed additional emphasis on competition in awarding of contracts, especially for equipment repair parts, in accord with the overall AMC stress upon improved competition for the acquisition of spare parts.

(U) One command management issue confronted in FY85 involved the acceleration of the schedule for the AH-64 Combat Mission Simulator and another concerned fragmentation of the responsibility for synthetic flight training systems. In order to speed up the acquisition of Combat Mission Simulators for the AH-64, a multi-year contract was let for six production model simulators prior to the completion of prototype development. It was expected that this would speed up delivery to the field by approximately four years.

(U) Fragmentation of management responsibility for the SFTS program was brought about by funding the program indirectly through Weapon System PMs in AVSCOM. PM AVD noted that the indirect funding resulted in delays in receiving project funding that "will result in unnecessary perturbations in the SFTS program." To solve this problem "it is recommended that funding for the Synthetic Flight Training System be transmitted to PM AVD from AMC rather than through the aircraft system project officer's office. Under this concept, PM AVD will exercise a contract with the system project manager to establish cost, schedule, and technical performance of his simulators."[6]

PM Ground Forces Training Devices (U)

(U) Multiple Integrated Laser Engagement System (MILES), the tactical training system in which eye-safe lasers and laser detecting devices were used to simulate various weapon systems, was expanded in FY85 by PM Ground Forces Training Devices (GFTD). Production of the M1 tank MILES was completed on schedule and within cost in March 1985. The M2/M3 Bradley LOT I and II were completed as scheduled and fielding continued worldwide. Two planned extensions to the existing MILES system were the Air to Ground Engagement Simulators (AGES) and the Air Defense Engagement Simulator (ADES) I. AGES used the Cobra as the offensive aviation weapon system and could simulate the Cobra's use of the TOW, of a 20mm gun, or the 2.75 rocket system. The ADES systems included both the towed and self-propelled Vulcan, the Chaparral, and the Stinger.

Milestones for the AGES/ADES I (U)

Development Acceptance in Process Review	May 1982
Production Contract Awarded	Jun 1982
Initial Production Test	Aug-Dec 1983
First Article Test Completed	Apr 1984
Initial Operational Capability	Jul 1984

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6 Historical Review FY85, PM AVD, submission of PM TRADE for AHR, FY85.

Lots I and II Shipments Completed (below target cost)	Feb 1985
Lot III Shipments Completed (below target cost and 2 months ahead of schedule)	Jul 1985

Source: AHR input PM TRADE, FY85.

(U) A planned follow-on laser engagement system to AGES I was AGES II. Described by PM GFTD, it would "enable helicopters to participate in combined arms tactical training" and "provide a realistic means of simulating helicopter operations during the course of tactical training and realism in tactical training by the inclusion of real-time casualty assessment in combined arms exercises incorporating air-to-ground weapon systems."[7] It would provide training for the AH-64, UH-60, CH-47D, OH-58D and the GLVVD. The full scale development contract was scheduled to be let in the second quarter of FY86.

(U) Ancillary to the MILES program were a number of blank fire adapters and weapon effect signature simulators to provide training realism. The M19 and M20 blank fire adapters for M2 and M85 machine guns completed production deliveries and were transitioned out of PM management. Production was also completed for the M21 blank fire adapters for the M240 machine guns on the M48, M551 and M60 tanks as well as the M2/3 Bradleys.

(U) Delivery of the M21 extension for the M1 tank was scheduled for completion by the second quarter of FY86.

(U) The Gunfire Simulator (GUFS) provided a firing mechanism for the M21 pyrotechnic cartridge to produce a simulation of a main tank gun firing. A production model was being built for Fort Irwin and was type classified for use with the Remoted Target System (RETS).

(U) Engineering development was completed for application of the Automatic Weapon Effects Simulator (AWESS) to both the multi-barrel 20mm Vulcan and the single-barrel 25mm M2/3. Award of a production contract was scheduled for the second quarter of FY86.

(U) The Machine Gun-Automatic Weapons Effect Signature Simulator was to provide weapon signature simulation for the M2 and M85, 50 caliber and the M240 7.62mm machine guns. In FY85 the project was in the proposal evaluation stage and was expected to shortly enter the full scale development stage with a production decision anticipated in FY88.

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[7] PM Ground Forces Training Devices input, submission of PM TRADE for AHR, FY85.

(U) The Collision Avoidance Radar Navigation System Trainer was designed to be used for simulated hands-on training in radar piloting and navigation at the US Army Transportation School. It was operational as of October 1985.

(U) The Army Training Battle Simulation System (ARTBASS) had its production contract for ten units awarded on 28 February 1984 with the device being type classified in September 1985. It was anticipated that a competitive contract would be awarded for six more units.

(U) The results of Operational Test II, received by March 1985, indicated the RADIAC Set, Trainer, was not yet ready for production; however, discussion with the operational tester indicated that the problems could be resolved.

(U) A contract to develop a SIGINT/EW (Signal Intelligence/Electronic Warfare) Equipment Operator Simulator (SEOS) was let on 4 September 1985. The SEOS would be used to support the electronic warfare operations course at the US Army Intelligence School for Military Occupatinal Specialties 05D, 98C, 98G, and 98J. The following weapon systems would be simulated by the SEOS: Quick Fix, Quick Look II, Trailblazer, TACJAM, Improved Guardrail V, and Technical Control and Analysis Center (TCAC).

(U) A contract for the Morse Mission Trainer, to be used for training by a national level intelligence system, was awarded during the third quarter of FY85. The trainer was to be an institutional morse code intercept mission simulator.

(U) The Remotely Piloted Vehicle (RPV) Institutional Trainer was planned as a one-of-a-kind device to be used to train both operators and organizational maintenance personnel in critical tasks for the RPV ground control station (GCS). The device would consist of a main frame computer and three training groups. The first group would consist of three instructor stations and fifteen air vehicle operator stations. The second group would consist of three instructor stations and fifteen mission payload operator stations. The third group would have four integrated training stations consisting of GCS mockups, each with its own instructor station. A contract was awarded on 13 December 1984, and the first six months were spent in an intensive ISD effort to determine the training objectives. A PDR was held in October 1985, and a capabilities demonstration was scheduled for February 1986.

(U) The Combined Artillery/Aviation Simulator (CAAS) consisted of a combined procurement of the Field Artillery Turret Maintenance Trainer (FATMT) and the Aviation Maintenance Interchangeable Panel Trainer (AMIT). On 13 August 1985 a contract was awarded to Raytheon Service Company for twenty-two FATMTs and six AMITs. On 13 September 1985 the PM exercised its option to order an additional fifteen FATMTs, which were to be scheduled for National Guard regional maintenance training sites and for the 7th Air Training Center (ATC) at Vilseck, Germany.

PM Armor Training Devices (U)

(U) By the end of FY85 a total of fifty Conduct of Fire Trainers (COFT) for the M1, M1E1, M2/3, and M60A3 had been delivered in the United States and Europe, with a goal of supplying each armored battalion with at least one such trainer. The design for the four COFTs had emphasized commonality, with a resulting 90 percent commonality across the four systems. The initial production contract was passed from the PM to AMCCOM for award of Lots IV and V (see above under "PM TRADE" for more on its transition), while work was started on an Institutional Conduct of Fire Trainer to be used by the Reserves and National Guard. The M1E1 version of the COFT was to be delivered to the field before the actual weapon system. The overall program was below the target cost and ahead of schedule, with initial fielding reports having indicated availability rates in excess of 98 percent.

US Army Information Systems Management Activity/Program Manager Army Information Systems (USAISMA/PM AIS) (U)

(U) On 1 October 1984 the US Army Communications Systems Agency/PM Defense Communications Systems (Army) had the first part of its name changed to US Army Information Systems Management Activity. In October 1986 the last part of the name was changed to Program Manager Army Information Systems to reflect its function as the capstone PM for Army Information Systems.

(U) As was related in the FY84 AHR, this organization was simultaneously a major subordinate command of the US Army Information Systems Command and a program management office of the Army Materiel Command, with the commander of USIAMA/PM AIS reporting to the CG AMC and/or the CG Information Systems Command as appropriate.

(U) Almost all of the tasks and funds assigned to USAISMA/PM AIS came from the Information Systems Command; however, the one major AMC-assigned project on-going by the end of FY85 was Regency Net.

(U) The goal of this project was to establish in Europe and Korea an arrangement of high frequency radio terminals. Such terminals were to be able to provide secure data and voice transmission for rapid and accurate communication with the lowest command levels and also permit transmission of messages up the chain of command. A criterion of the system would be to "incorporate the capability to maintain optimum performance in order to overcome the postulated electronic warfare threat through the 1990's." The system would use four different terminals: one (AN/TRC-179(V1)) would be in a shelter that would either be mounted on a vehicle or dismounted in a fixed location, the second (AN/TRC-179(V2)) would be integrated into Ground Launch Cruise Missile Launch Control Centers, the third (AN/FRC-180(V)1) would be installed in buildings or classrooms for training, and the fourth (AN/GRC-215) would be mounted on a 1/4-ton truck or similar vehicle and would be supplied with a man-pack for use away from the vehicle.

(U) Regency Net was launched when the JCS approved the requirements of the US Army Commander in Chief, Europe for the project in April and May 1982. On 21 December 1983 a contract was awarded to Magnavox Government and Industrial Electronic Co. "to engineer, furnish, integrate, test and make operational the initial product samples."[8] The contract included three fixed-price options for additional terminals, logistics, and training, while the three program years for these options were priced on both a multiyear and single year basis to provide the Government additional flexibility. In FY85 the major efforts of the contractor were in the areas of engineering and software design. In December 1984 the first contract option was exercised for the rest of the logistical support items and for production quantities of Regency Net terminals. In addition, in March 1985 Magnavox received a separate contract to conduct site surveys in Europe. The surveys were to be completed in February 1986.

(U) In October and November 1984 the PM Regency Net had a team conduct a requirements fact finding and site survey in Korea. The team subsequently completed a draft specification and statement of work (SOW) and draft acquisition requirements package (ARP) in August 1985. Also in August 1985, surveys were conducted at four CONUS sites that were to be used for Regency Net initial production sample tests. Production samples were to be readied by July 1986, to be followed by production deliveries beginning April 1987 and continuing into FY89.

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[8] USAISMA/PM AIS Annual Review for FY85.

CHAPTER V

MATERIEL READINESS (U)

DCS For Readiness (U)

(U) Workplace Automation. The DCS for Readiness continued with an aggressive program of workplace automation that began in April 1984, with identification and documentation of information processing requirements. Due to funding constraints, the total identified requirement could not be met in a single step and a phased approach to procurement and implementation was adopted. The 22 November 1984, delivery of three UNIX-based super microcomputers (two Plexus P60s and one Plexus P35) greatly enhanced the productivity of the DCS. A comprehensive plan for total information automation roundout was approved. The plan, when funded, was expected to provide an additional $1.6 million worth of hardware and software to fully automate the DCS in accordance with the HQ AMC automation architecture.[1]

Concepts and Doctrine Division (U)

(U) AMC Strategic Long-Range Plan (SLRP). During FY85, AMC continued development of its first Strategic Long Range Plan. The draft plan, AMC Pamphlet 5-10, was fully staffed throughout the command and its implementing regulation, AMC-R 11-3, Vol. 2, was also drafted. In addition, in June 1985 the MSC Commanders were formally tasked to develop first drafts of their own SLRPs by December 1985.[2]

(U) Logistics Systems Program Review. The second and third updates of the Logistics Systems Program Review (LSPR) were held at the USA Logistics Center, Fort Lee, Virginia, 27 February and 3 September 1985. They were hosted by the CG, Logistics Center and were designed to brief the VCSA on the latest TRADOC logistics improvement programs, both in doctrine and in materiel. Briefings were presented by the TRADOC schools.[3]

(U) The DCS for Readiness' Concepts and Doctrine Division was assigned responsibility within AMC for coordinating all AMC input to the LSPR and for monitoring the overall review. As such they prepared briefing books, which contained advance copies of the panel

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1 DCS for Readiness, FY85 AHR submission, Concepts and Doctrine Division.
2 Ibid.
3 Ibid.

briefings, together with AMC input, for the Deputy Commanding General for Materiel Readiness, the Deputy for Management and Analysis, and the DCSs for SMT and DEA.[4]

(U) AMCLOG 21 - The AMC Logistics (AMCLOG) Mission Area Analysis. The AMC Logistics 21 (AMCLOG 21) MAA was launched in FY84, but it was 17 January 1985 before the first tasking to the commodity commands and DESCOM was made. The program's aim was to locate deficiencies in the AMC Logistics Sustaining Base that would prevent AMC from providing the Army in the field with needed logistics support to the year 2002. The output of the MAA was to be an AMC Mission Area Development Plan (MADP), a single action document which would establish an audit trail, a time-phased program and a verifiable list of deficiencies. These would be used to provide input to the PARR, compete for funds in the PPBES process, provide input to RDA plans, and compete for Logistics R&D funding.[5]

(FOUO) Because of the size of the AMC mission, the first phase of the AMCLOG 21 MAA was limited to the high payoff logistic functions of supply, maintenance and transportation. Other functions such as facilities, procurement, production, automation and physical security would be considered only in so far as they related to those functional areas. This phase of the AMCLOG 21 MAA, basically a literature search of current studies, was completed 30 June 1985. The results of the Phase I effort were consolidated and prioritized into an AMC MADP which consisted of two volumes, published shortly after the end of the fiscal year. The first volume listed in some detail the 100 top deficiencies in AMC's ability to perform its mission, ranging from the most critical issue concern--the country's low level of industrial preparedness. The second volume tabulated all identified deficiencies, some 294 in all.

(FOUO) Listed with the identified shortcomings were those actions AMC could take that were perceived to lead toward a remedy. Included among the high priority remedies were such items as: Funding the munitions production base to meet mobilization/surge; providing low production capability for fire control devices (lack of production capability for optical glass in the US); procure ammunition and weapons authorized acquisition objective shortfalls; include mission/operating software as a commodity (no system set up to handle software as a commodity); provide capability to meet production shortfalls in RDX/HMX (explosives); obtain critical raw materials; provide equipment requirements for depot supply mission; eliminate limitations of production capacity and

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[4] Ibid.
[5] Ibid; For earlier details, see FY84 AHR.

responsiveness (due to failure to meet Environmental Protection Agency standards); provide safer and more efficient propellant production.

(U) Phase II of the AMCLOG 21 MAA began 1 July 1985 and would be an in-depth analysis of AMC's capability to support the Army in the field both at the present time and as it evolved through the II MAA which was based on an AMSAA developed methodology and had a target completion date of 28 February 1986.

(U) Technical Information Management System (TIMS)/Computer Aided Logistic Support (CALS). TIMS was designed to be an automated data base of technical information which could be made available throughout the Army down to the operating level where it could be used to obtain technical information about a specific piece of equipment. In 1985 much of the activity concerning the TIMS program centered around the acquisition strategy which had been approved in FY 84. The CECOM TIMS Office had previously been given lead command responsibility for development, implementation and management of the TIMS network. During FY84, the mission was placed within the Center for Tactical Computers (CENTACS). Reprogrammed funds received during July 1984 allowed a task order to be placed with Computer Science Corporation for Phase IA of the TIMS architecture effort, contracting for data collection and analysis to establish a baseline of the state of technical data within the Army today.

(U) Briefings were given throughout the year to acquaint the DA staff and others with the project in order to solicit support. Principal Army staff members briefed on the program included the DCS for Logistics, the DCS for Information Management, and the Director of Army Research and Technology (ODCSRDA). On 24 September 1985, the Deputy Secretary of Defense issued a memorandum to all Military Services to implement a new program "Computer Aided Logistic Support (CALS)". DA Staff proponent was the DCS for Logistics; AMC lead for CALS was the Concepts and Doctrine Division, as designated by the DCG for Materiel Readiness.

(U) Rationalization, Standardization and Interoperability (RSI). During FY85, the Concepts and Doctrine Division participated in the NATO Land Force Logistics Working Party (LOGWP) and US-GE Supply, Maintenance and Transportation Working Group. In addition, technical support was provided to the senior US representative to the LOGWP. Participation in the LOGWP program and the US-GE logistics support forum focused on the analysis of problem areas and recommendations of solutions for implementing interoperability enhancements. Significant interoperability and standardization initiatives pursued included: Equipment Interoperability Matrices; NATO Recovery Procedures and

Recovery Data Publication; Identification of Problems of Transporting Ammunition Across the Boundaries of Two National Corps; and development of an Allied ammunition support publication.

(U) The AMC-TRADOC Ammunition Interoperability Working Group developed ammunition interoperability and substitution matrices which were included in the Ordnance Missile and Munitions Schools, Program of Instruction (POI). AMC interoperability initiatives and objectives were achieved through active coordination and participation in US Army Workshops on Alliance Logistics, Army Headquarters of Germany, Belgium, Luxembourg and Netherlands. The Supply and Maintenance Assessment Review Team (SMART) was also used as a vehicle to evaluate and implement materiel and non-materiel interoperability enhancements. Notable among the interoperability enhancements pursued in FY85 through the Supply and Maintenance Assessment review Team were: Tactical Robotic Support, Vehicle-Battle Damage Assessment and Repair (BDAR); Nickel Cadmium Battery Charger and Analyzer, and the Mobile Rail Loading Ramp (MLR).

(U) Total Army Analysis (TAA). The austere combat service support (CSS) force structure, resulting from the Army of Excellence initiatives, resulted in a need for a greater range of support from the wholesale logistics support base and AMC. Combat service support personnel who perform the functions of supply, maintenance, transportation, medical support, field services, and administrative support had been severely reduced to provide the personnel for increases in combat personnel. Although the TAA process structures the theater Army to perform all of its CSS mission workload, the lack of programed active, reserve component, host nation support (HNS) and contractor resources to accomplish the projected workload results in significant portions of the CSS force structure being assigned to the unresourced or "COMPO 4" category. This shortfall was especially significant in the area of intermediate rear maintenance support. During wartime, shortfalls of heavy equipment maintenance (HEM)/light equipment maintenance (LEM) units and their HNS equivalents could generate maintenance overflow from the theater, thus requiring effort from other sources, including the CONUS base. From a doctrinal standpoint, AMC would be expected to assume responsibility for this overflow. It was therefore necessary to identify and quantify this overflow in order to begin planning to accommodate the influx of maintenance workload into the CONUS. Therefore, AMC used the TAA process not only as a vehicle to input manpower requirements, but also as a basis for development of improved wholesale level concepts and doctrine for support of the Army in the field. One of these efforts was the Estimation of Shortfalls in Theater Intermediate Maintenance for AMC TAA Evaluation (ESTIMATE) study.

(U) As a matter of background, AR 71-11, Total Army Analysis (TAA), assigns AMC the responsibility to assess the impact of TAA combat service support force structure actions on the CONUS wholesale logistics base. This assessment is required in order to develop depot workload forecasts which would, in turn, be used as the basis for determination of mobilization manpower/storage space requirements, depot capabilities and development of MOBTDA's.

(U) The scope of the ESTIMATE involved an analysis of workload shortfalls in Army intermediate maintenance units and quantification of this workload. The study was to be completed in January 1986 and would provide maintenance workload (by Military Occupational Specialty and Quantity) which may be applied to AMC's mobilization workload requirements.

(U) Preconfigured Unit Load (PUL). The Army has embarked on an aggressive near term force structure and design effort with the overall objective of providing an Army of Excellence (AOE) that makes the best possible use of available resources to meet the Army's varied missions. One such approach is the provision of routine resupply of selected expendable supplies by Preconfigured Unit Loads (PUL).

(U) The overall concept for PUL envisioned assembly at the wholesale support level of predetermined quantities of selected expendable supplies, configured by function and type unit, packed in disposable containers or on standard pallets, and assigned a single National Stock Number, to be ordered by using units/organizations via single-line requisition. Four PUL configurations were to be developed and tested in FY86 in order to prove the concept, although after the successful testing other configurations would be added. Of the four PULs, three were to be provided by AMC while the Defense Logistic Agency (DLA) would provide the fourth. The AMC PULs were to consist of battalion size packages of administrative and housekeeping supplies containing 15 Days of Supply (DOS), sets of chemical protective clothing for 25 and 50 soldiers (including items such as shirts, pants, boots, gloves, etc.) configured in mixed sizes, and one hundred meters of hasty barrier materiel.

(U) AMC was tasked to implement the PUL concept within the wholesale supply community. To accomplish this AMC developed a wholesale level operational concept for resupply by PUL to support the Army of Excellence and was working with the QMS, as lead DA activity, to provide this support during certification testing of the 7th ID(L), currently scheduled for Jan - Aug 86. The PUL concept would be evaluated by TRADOC, including verification that the

methodology for determining contents of individual PULs is sound, and a determination as to whether the physical distribution system is capable of responding to division needs in a timely manner.

(U) Upon completion of test, AMC intended to put the wholesale operational concept into its final form, incorporating recommendations from the Army community. Its final concept would be submitted for staffing throughout Army.

Logistics Assistance Division (U)

(U) MSC Readiness Directorates. In August 1984, in order to establish a program of "Focused Readiness," each MSC was directed to create from existing resources in April 1985 a single Readiness Directorate reporting to the MSC's Deputy Commanding General for Readiness and Procurement. Each Readiness Directorate was to consist of four divisions: logistics assistance; readiness analysis; policy, plans and programs; and force modernization integration. The new Readiness Directorates were to serve as the MSC's focal point for all readiness issues; identify equipment, units, and geographic regions with readiness problems; develop and execute corrective action plans; and become proactive concerning readiness.[6]

(U) In early 1985, the Readiness Directorates were established in the MSC's and approved by AMC with minor deviations in organizational structure due to unique MSC mission requirements. The 1986 goals for Focused Readiness were to fine tune the readiness communities' networking and communications capabilities, enhance the readiness analysis capabilities, and begin to measure effectiveness.

(U) Enhanced Materiel Readiness Reporting System (EMRRS) - AR 700-138. The Enhanced Materiel Readiness Reporting System was an AMC proposed and HQDA approved project that consolidated the three materiel readiness reporting systems, those directed by AR 95-33 on Aircraft Reporting, by AR 750-40 on Missile reporting, and by Chapter 4 of DA PAM 738-750 on Ground Equipment into a single and comprehensive readiness reporting system and regulation (AR 700-138 Logistics Readiness and Sustainability). The new regulation was published 27 December 1985, and provided the soldier the necessary information, tools, and indicators required to manage the materiel readiness program at the unit level. The final phase of this initiative continued into FY86 and consisted of the development of a standard form for reporting the readiness of all commodities and the streamlining of the transmission process for readiness data by using the US Message Text Format. This was to be implemented in 1987. The

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[6] Unless otherwise noted, all material on the Logistics Readiness Division is taken from the DCS for Readiness, FY85 AHR submission.

cumulative effect of these changes was to be the standardization of the US Army materiel readiness reporting process and a substantial reduction in the administrative processing and transmission time of readiness data prior to its availability for analysis.

(U) Readiness Integrated Data Base (RIDB). The RIDB network expansion was a Readiness initiative that provided the MSCs with secure remote access to RIDB which was a Materiel Readiness Support Activity managed and maintained central repository for materiel readiness data and reports. The network expansion was to provide the MSCs with the ability to remotely retrieve, through secure ADP and communications equipment, materiel readiness data on a real time basis. Planned software enhancements in conjunction with the real time and on-line capability would allow the MSC's to immediately query and display readiness data in a wide variety of formats, as well as provide unique analysis capabilities.

(U) The ADP and communications equipment was acquired and shipped to the MSC's in 1985, with installation and implementation planned for early 1986. When completed, this would substantially improve the MSC's capabilities and timeliness for readiness analysis, thereby allowing them to become proactive on readiness issues.

(U) Readiness Offensive. Closely linked to the RIDB was the Readiness Offensive, a program that was initiated to stimulate the AMC readiness community into identifying problem areas and focusing AMC resources to fix systemic problems, monitor progress, and continually refine the readiness analysis process. Special products provided by AMC's Materiel Readiness Support Activity were being provided to each MSC; however, the direct access to RIDB by all MSC's was expected to greatly enhance this initiative. The RIDB terminals would allow each MSC to perform specialized analysis on-line and in real time. This allowed the MSCs to identify specific target Line Item Numbers (LIN) that had not performed according to the DA standard, query the data base for information, and develop action plans to improve their performance. This readiness initiative would standardize the readiness analysis process and provide AMC the ability to monitor equipment readiness by MSC's targeted LIN's, as well as aggregate MSC data to determine program success. The iterative process and the feedback nature manifest the evolutionary and long term aspects of this effort since performance trends were more important than information for any one reporting period.

(U) Resources To Readiness. In 1985, AMC conducted a study of the relationship of the availability of resources to Army readiness. A preliminary finding of the study indicated that weapon systems with high wholesale level stock availability rule readiness rates. Further analysis of this relationship was conducted in two phases. Phase I,

completed in Spring 1985, was performed by the Readiness Analysis Branch of AMC. It consisted of determining through regression analysis and correlation techniques, whether Not Mission Capable Supply (NMCS) readiness rates were related to wholesale level stock availability. This phase of the study concluded that a statistically sound relationship between wholesale level stock availability and NMCS readiness rates could not be determined because of numerous unquantifiable variables that impacted readiness rates, and that intensive management efforts at wholesale and retail levels for commodities in short supply could counteract the negative effects of short supply on NMCS readiness rates.

(U) Phase II of the study was being conducted by the Inventory Research Office (IRO). It used an analytical model to estimate the impact of wholesale level stock availability on NMCS. This phase of the study was being conducted via the Selected Essential-Item for Availability Method (SESAME).

(U) Ad Hoc Special Studies. Periodically, special independent studies were conducted for items of equipment or weapon systems that appeared to have readiness problems. The AMC Field Artillery Systems Independent Assessment (FASIS) was conducted by the Deputy Chief of Staff for Readiness in the latter part of 1984. The identification and augmentation of corrective actions extended into early 1985. The study reviewed the adequacy of corrective measures implemented to improve spare parts support posture and to determine why supportability problems were occurring, assessed get well plans, and captured lessons learned. The end result of this comprehensive assessment of the TACFIRE, BCS, and FIREFINDER systems was expected to pay great dividends in the future and would allow the Army to continue the fielding process, provide customer satisfaction and sustain the readiness of fielded systems.

(U) ADEA Mission Changes. In July 85, the ARSTAF began a review of the ADEA charter which resulted in the expansion of the ADEA mission to encompass expeditious development of materiel for all configurations of Army forces. The expanded ADEA charter was redrafted, extending ADEA functions to the development and evaluation of operational concepts, materiel requirements, training developments, tactics and organizations for the broad range of scenarios applicable to general purpose, light and heavy forces, Special Operations Forces (SOF) and Low Intensity Conflict (LIC).

(U) AMC continued to support ADEA and its missions through an on-site, AMC Support Activity (AMC-SA) at Ft. Lewis, Washington, which provided ADEA access to technical expertise and materiel contracting and procurement capability.

(U) Logistic Assistance Program (LAP). In 1985 a number of major initiatives were underway to improve the LAP and to improve Army and AMC readiness.

(U) Perhaps the most visible AMC element that interfaced with the field soldier was the AMC Logistic Assistance Program, AMC's customer service organization. AMC had 51 Logistic Assistance Offices (LAO) throughout the world, headed by officers and DA civilians, located at MACOM and installation level. About 200 civilians and soldiers guide and integrate the logistic efforts of about 1000 MSC civilian Logistic Assistance Representatives (LAR). The LAR's were stationed from installation level down through battalion and selected company level worldwide. These LAP members provided advice and assistance to soldiers on a daily basis on all facets of logistics, facilitated AMC logistic support to the field, and accompanied their soldier customers on major JCS and regional exercises.

(U) Overall LAP effectiveness was targeted for specific improvement. A Semi-annual Emphasis Program was established to focus the entire LAP to improve specific items of AMC/Army interest. A LAP manpower requirements determination model was developed and would be tested in 1986 in order to better justify and assign scarce personnel resources to assist the soldier. Support to MACOM/CINC operations plans was substantially improved, as was LAP support to JCS and regional exercises. Increased numbers of Individual Mobilization Augmentees were used throughout the LAP to prepare them for mobilization duties. A LAP Redefinition Program was developed to improve LAP communications, clarify roles, and establish formal mechanisms to promulgate goals and objectives. Other programs were being developed to provide the LAP with an automation capability, to improve communications, and to provide a LAR activity reporting system to link LAR activity with installation unit readiness performance.

(U) On 11 January 1985, the CG, AMC directed an analysis of the LAP program and structure. In March of 1985 the program was briefed to the CG. The CG's decision on restructure was provided to the field in late May 1985. A provisional reorganization was to be effective 1 Nov 1985. This restructuring would realign the LAP on a regional basis without regard to command boundaries. It also resulted in a further assertion of HQ AMC influence over the LAP. These results were accomplished by implementation of the following:

a. Restructuring the seven major command oriented offices into four geographically oriented offices: LAO-FAR EAST, LAO-PACIFIC, LAO CONUS and LAO EUROPE.

b. Implementation of AMC-wide uniform performance elements for all Logistic Assistance Representative (LAR) appraisals.

c. Establishment of LAO input to LAR career appraisals.

Taken together, these actions resulted in a substantially improved AMC customer service organization.

Military Plans and Operations Division

(U) The Military Plans and Operations Division is covered in the classified section of the FY85 AHR submission in the HO AMC HO archives.

DCS for Supply, Maintenance and Transportation (U)

Reorganization (U)

(U) On 1 May 1985, concurrent with Brigadier General Bill J. Stalcup's assumption of the position of DCS for Supply, Maintenance and Transportation, the DCS was reorganized in an effort to realign manpower into better defined mission areas. In the reorganization several large divisions were reduced in size in an effort to prevent the overlapping of duties and responsibilities. The reorganization had several advantages, achieving a better balance in division size and span of control, while attaining a better ratio between clerical and professional personnel. National Inventory Control Point (NICP) functions were consolidated by realignment of redundant areas. Lines of communication were streamlined. Integrated logistics support and maintenance engineering support merged into one division. Creation of separate vehicle and troop support divisions reduced the complexity of the Command, Control, Surveillance and Support System Division. Item management policy now came under one division. Performance evaluations were performed by mission area. Functional coordination for automation was moved to the appropriate mission areas.[7]

Maintenance and Integrated Logistic Support Division (U)

(U) Division Created. As part of the 1 May 1985 reorganization, two branches of the Integrated Logistics Support and Data Management Division were combined with three branches of the Maintenance Division to form the new Maintenance and Integrated Logistic Support Division. Two residual functions of the previous Maintenance Division went to other organizations. Publication policy was transferred to the DCS for Information Management while the depot

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[7] DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC. Additional coverage of the reorganization will be found below as divisions are discussed individually. In many instances, actions taken by this DCS concerned specific weapon systems and are discussed in the Force Modernization Chapter. The Force Modernization Integration Division coverage is entirely within that chapter.

maintenance functions were transferred to SMT's Depot Operations Division.[8] In this AHR, Integrated Logistics Support topics will be covered primarily in the Force Modernization chapter.

(U) New Equipment Training Plan Automation. In FY83 the decision to automate the New Equipment Training Plan (NETP) process was made at DA. The Assistant Secretary of the Army (Installations, Logistics and Financial Management) signed the mission needs statement in March 1984. The project manager charter was issued in March 1985. The system in development was to include both new and displaced equipment training needs. It would further link NET planners worldwide and reduce the need for Training Support Working Group meetings. Full operability was anticipated by the first quarter of FY86.[9]

(U) Sample Data Collection Program. The Sample Data Collection (SDC) program expanded during FY85, becoming increasingly important in measuring performance of fielded equipment. No other source provided data of sufficient accuracy and detail to allow such measurement. Initiatives by Army leadership increased the use of SDC data in support programs, the budget process, manpower programs, and logistics studies for all Army intensively managed systems. Under SDC the equipment proponent develops an SDC plan, field procedures guide, and a draft DA circular. The Maintenance and Integrated Logistics Support Division of DCS SMT reviewed and approved each SDC plan submitted by MSCs and began a revision of the AMC supplement to AR 750-37 following revision by DA DCSLOG of the Army regulation to clarify the expanding role of SDC and to obtain better control over the program.[10]

(U) In the annual Army-wide review of all completed, ongoing, and planned SDC programs, completed in September 1985, viability of the SDC program was substantiated. The review panel of General Officers and SES personnel was chaired by the AMC Commander and included representatives from each AMC MSC. The annual summary report of SDC programs and benefits went out on a worldwide distribution to all concerned Army activities. A special effort was being made to "market" SDC--to enhance its acceptability and assure enhanced feedback and cooperation with participating units. Distribution of a semiannual newsletter was undertaken, and SDC articles developed by the MSCs appeared in Air Defense, Aviation, RD&A, TransLog, and Logistician magazines.[11]

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[8] DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ AMC.

[9] Ibid.

[10] Ibid.

[11] Ibid.

(U) Among the program benefits realized during FY85, data was provided for studies in the following areas: the Authorized Stockage Level/Prescribed Load List (ASL/PLL) program and budget, Manpower Allocations Requirements Criteria (MARC), MANPRINT, warranty, safety, and TWVULDP. SDC data was also used for hardware changes as well as changes in technical manuals; they impacted Product Improvement Program and Engineering Change Proposals. Reliability, Availability, and Maintainability (RAM) analysis and other system assessments were affected. SDC helped determine how far an aircraft could be flown through the MAX-FLY program as well as how far a wheeled vehicle may be driven throughout the Tactical Wheeled Vehicle Useful Life Determination Program (TWULDP). The CSA lessons learned initiative and tank fleet O&S studies drew on SDC data.[12]

(U) During FY85, SDC program data was being collected on some 60 weapons systems at 13 sites in the continental U.S. (CONUS) and 35 sites outside CONUS. Some 43 systems were being considered for inclusion during the FY86-90 time frame. Such day-to-day reporting was augmented by Field Exercise Data Collection (FEDC) programs to assess performance during simulated combat activities. FEDC programs in Europe and at the National Training Center (NTC) in California were augmented in FY85 by initiation of a program in Korea. Plans were also underway for similar programs in WESTCOM and Central America. Unit data collection was also being evaluated, and integrated systems collection (TROSCOM and CECOM) were initiated at four locations.[13]

(U) Ongoing actions in SDC at the conclusion of FY85 included provision of data useful to updating training courses and participation of SDC personnel in planning meetings for such automated systems as the Materiel Acquisition Management System (MAMS) and the Standard Army Maintenance System (SAMS) to assure timely integration of SDC. A five-year SDC plan had been developed and was being brought current, along with an array of reports, distribution lists and the like in an effort to assure valid, useful and timely SDC information. Quarterly working group meetings between HQ AMC and MSC SDC managers were held during the year.[14]

(U) Oil Analysis Program. The Army Oil Analysis Program (AOAP), dating from 1961 but coupled with the tri-Service Joint Oil Analysis Program (JOAP) in 1980 enjoyed success in FY85 with the successful development of a diagnostic procedure for the AH-1

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[12] Ibid.
[13] Ibid. Conversation with Edwin Vaughan, January 8, 1987.
[14] DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

helicopter. The AOAP project manager in conjunction with the US Army Aviation Development Test Activity, Fort Rucker, Alabama, the JOAP-TSC, and the Corpus Christi Army Depot used ferrographic analysis of the Cobra's swashplate grease to detect wear metals and pending swashplate failures.[15]

(U) Other items of equipment on which considerable work was expended during the year were the M60-A3 tank and the BLACKHAWK. PM-AOAP contributed to improved air filteration for the tank engine and, tasked by the Blackhawk Special Task Force, contributed to an assessment of that item's transmission and gearboxes.[16]

(U) The PM-AOAP conducted field testing of new and modified software for the AOAP laboratories' Wang stand-alone computers. Following the test, the updated software was installed in laboratories Army wide. A team from PM-AOAP installed the WANG minicomputer in the Anniston Army Depot oil analysis laboratory, beginning the automation of all the depot oil analysis laboratories, a process that was to be completed during FY86.[17]

(U) Reliability Centered Maintenance. A variety of actions were taken as part of the Army's reliability centered maintenance (RCM) program. As new Depot Maintenance Work Orders (DMWO) were developed during the year, a total of 219, existing DMWOs continued to be scrubbed. During the year the number of scrubbed DMWOs grew by 17 to 69 such since the start of the DOD-mandated effort in 1976. The DMWOs set forth the procedures for the teardown of equipment sent in for maintenance. Under the RCM approach, such techniques as preshop analysis to determine the level of teardown actually required by the piece of equipment being overhauled were inserted, the objective being to avoid unneeded work, reducing the cost of maintenance while retaining equipment reliability. Under a combat vehicle evaluation program (CVE), for instance, prior mileage criteria for overhaul of combat vehicles were eliminated; approved by DCSLOG, the sixth CVE evaluation cycle started in October 1984 and was completed in September 1985.[18]

(U) A cumulative total of 737 Technical Manuals and Lubrication Orders, 244 during FY85, were reviewed by the MSCs under the provisions of DA Pamphlet 750-40, Guide to Reliability Centered Maintenance (RCM) for Fielded Equipment. This pamphlet set forth the

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[15] Ibid. Problems with Army aircraft engines and transmissions were the original incentive for the AOAP, launched with help from the Navy Oil Analysis Program, then already in existence.

[16] Ibid.

[17] Ibid.

[18] Ibid. See also, FY84 AHR.

criteria to be used to determine the mode of maintenance of specific parts of a system, i.e., whether it should be performed by replacing parts that failed, by periodic inspections, by monitoring performed by the operator, or by replacing parts at fixed intervals of time or usage. A final option, considered only in situations where the failure of a component could lead to mission failure, safety hazard, or violation of regulation or statute (e.g. a violation of pollution laws) and where the failure could neither be detected in advance nor prevented by periodic replacement, was redesign of equipment.[19]

(U) During FY85, the Army Logistics Management Center (LMC) conducted two on-site training courses on RCM.[20]

(U) Maintenance Expenditure Limits. Maintenance expenditure limits (METs) were used to determine if repair of an item was economical or if it should be replaced. In May 1983, a Defense Audit Service (DAS) report showed that the depot MELs used by all three Services could not be justified and were not adequately managed. As a result, in the Summer of 1983 a project was begun to develop new policies and procedures for managing the MEL at all levels of maintenance. In October 1985 AMC submitted to HQDA proposed policy changes on MEL for inclusion into AR-750-1, Army Materiel Maintenance Concepts and Procedures. An AMC pamphlet on determining and managing the MEL at depots was scheduled for completion in 1986.[21]

(U) Contractor Support of Logistics. In February 1985 AMC submitted a draft regulation, AR 700-xx, on Contractor Support of Logistics for Weapon Systems and Equipment. It was returned to AMC in March to be reformatted into the new UPDATE format being used for regulations, and AMC returned a reformatted version in September.[22]

(U) AMC Maintenance Board. As a result of a CG, AMC initiative, the AMC Maintenance Board (AMCMB) was established under the chairmanship of the DCS for Supply, Maintenance, and Transportation in FY84, but held its first meeting in October 1985, with members consisting of Directors of Maintenance and Materiel Management of the MSCs and Chiefs of Maintenance and Supply Divisions of DCSSMT. It planned on four or five meetings per year as forums for presenting subjects of mutual interest and reaching decisions to resole critical issues.

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19 DCS for Supply, Maintenance and Transportation, FY85 AHR submission, and FY84 AHR, HQ, AMC.

20 DCS for Supply Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

21 Ibid.

22 Ibid.

(U) Tactical Wheeled Vehicle Useful Life Program. In April 1982 the House Armed Services Committee requested a comprehensive study to determine when it was economically desirable to replace a vehicle. Proceeding on schedule, the first interim report due to the committee was submitted 30 March 1984 on the basis of seven months of data. The second interim report was submitted a year later, and unlike the first report presented certain conclusions. The third interim report, due in March 1986, was expected to be followed by the final report in December of that year. The TWVULP model is expected to have applications with other groups of equipment.[23]

(U) Electrostatic Discharge. In FY85 AMC was acting on the problem of destruction of printed circuit boards by static electricity. This had a negative effect on readiness and, in some applications, presented hazards to personnel. LABCOM was assigned overall responsibility to lead and coordinate various efforts to solve the problem. Several guidance documents were published by AMC's Packing, Storage, and Containerization Center (PSCC), and CECOM was also studying possible solutions in the logistics area.[24]

(U) Modification Application Program. Modification of items already in the Army inventory continued to be carried out through Modification Work Orders. In FY85 a total of 63,391 modifications were applied to various pieces of Army and Army National Guard equipment.[25]

(U) In June 1985 the CG issued a Commander's Guidance Statement which stressed the need to follow an orderly program course of MWO improvements for fielded equipment as an alternative to new development.[26] An annual review of modification work orders for CONUS and USAREUR equipment was completed prior to the holding of coordination workshops in Huntsville, Alabama, and Zweibrueken, Germany, an approach followed successfully in FY84 as well. In addition, the worldwide POC directory for MWO was updated and distributed in time for the workshops.[27]

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23 Ibid.
24 Ibid.
25 Ibid.
26 CG, AMC, Commander's Guidance Statement No. 92, Modification Work Order Program Management, 27 Jun 85.
27 DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

(U) Supply and Maintenance Assessment Review Team. SMART continued its role of improving unit level logistics by promoting, evaluating, and implementing suggested changes from field units relative to combat service support. The SMART program in FY85 drew more suggestions in FY85 than it had in its first three years combined. In all, 4,058 ideas or suggestions were received, 2,048 of which required evaluation by the AMC community, notably the Material Readiness Support Activity in Lexington, Kentucky, the AMC action office for such evaluations. AMC continued its representation on the SMART review council, chaired by the DCSLOG, and including representatives from TRADOC, FORSCOM, and the 24th Infantry Division as well. The DCSSMT was the AMC representative.[28]

(U) Recent SMART initiatives included the introduction of tactical wheeled vehicle windshield component parts into the supply system instead of just stocking assemblies. The change was expected to save $2.3 million per year, and earned the suggester an award of $14,500 from the suggestion program. Another initiative, one expected to save $1.6 million annually, was changing the requirement for engine run-ups on helicopters from seven to 15 days. Overall, FY85 SMART savings amounted to over $4.8 million.[29]

(U) Equipment Improvement Recommendation (EIR) Program. Under the EIR program and use of SF 368, the Quality Deficiency Report, users of Army equipment have a means to report equipment faults and proposed improvements to the responsible commodity commands. In FY85 a simplified EIR reporting system was adopted and published in the December 1984 issue of DA Pamphlet 738-750, The Army Maintenance Management System. The significant change was a prioritization of reporting information to prompt users to extend the effort required to get information essential to evaluation of the submission while excusing completion of other blocks.[30]

(U) Differentiated from the more recent SMART initiatives in that it keyed specifically on equipment design, EIR was itself heavily promoted. Among these efforts were two articles on EIR published in PS Magazine in November and December 1984, the first discussing when SF 368 should be submitted and the second explaining the minimum essential data required. A handbook developed by MRSA and published first in July 1984 contained "how and why" information on submission of EIRs. It proved so popular during the year that a second edition was published in July 1985 to satisfy the demand. In June 1985, an EIR "Problem Solver" poster was developed to provide item by item guidance for the simplified use of SF 368 in a single

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28 Ibid.
29 Ibid.
30 Ibid.

graphic display.[31] A block of instruction on EIR submission was developed by the Army Management Engineering Training Activity (AMETA) with help from the AMC maintenance community for use with AMETA's User Reporting course, given five times in FY85. A training film on the EIR process was also in production.[32]

Automated Systems Integration Division (U)

(U) Logistics Systems Review Committee. As a result of efforts initiated in June 1984 to manage all the information requirements of AMC, existing review committees having jurisdiction over resource, acquisition, and logistic management were brought under the purview of a Command Review Council, a high level group whose principal members were the Deputy for Management and Analysis, the Principal Assistant Deputy for Research, Development and Acquisition, the Assistant Deputy for Materiel Readiness, and the Deputy Chief of Staff for Resource Management. The DCS for Information Management also served with the group to provide technical support as the Command's automation/communications systems builder. The Logistics Systems Review Council (LSRC), which oversaw such systems as the Commodity Command Standard System (CCSS), broadened its base with logistics acquisition assignments under LOGAMP, and its secretariat was given responsibility for supporting the the CRC and for integration of plans and concepts that make up the command-wide information master plan.

(U) The LSRC held a number of meetings in FY85 to approve the progress of various improvements to the standard software used in supply and maintenance management in AMC. On 11 September 1984 HQ AMC hosted a meeting on the Maintenance Data Management System (MDMS), an ambitious extension of the CCSS. CECOM had test prototyped MDMS, an updated system to replace the Army Maintenance Management Data Exchange (AMMDEX) and non-standard local systems used to manage depot-level hardware maintenance programs. MDMS would interface with finance and accounting, provide automated fund certification, and access existing procurement systems to provide automated procurement work directives. Proliferation of the system to the other MSCs was approved by the LSRC in FY85 to provide the first AMC-wide standard system for programming, budgeting, and managing execution of maintenance support activities.[33]

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[31] DA Poster 750-84, June 1985.
[32] DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.
[33] Ibid.

(U) Other system packages on which LSRC took action included Releases 68-70 for CCSS. Release 68 in-process review (IPR) I was hosted by ALMSA 4 October 1984. Division level and third party test results justified movement of the update to AMCCOM for prototype. The Committee also approved the immediate proliferation of "Deploy 4S", pre-prototyped at MICOM, to all MSCs. Release 68 IPR II was hosted by AMCCOM on 4 December 1984, at which time proliferation to all MSCs was approved. Also at the December meeting, CECOM was given prototype responsibility for a special release.[34]

(U) At the Release 69 IPR I at ALMSA 2 May 1985, LSRC approved prototyping at TACOM. Prior to the IPR II at TACOM 13 June 1985, the release was proliferated through the MACOMs as of 23 May, approval being garnered by messages to and from the committee members.[35]

(U) A special LSRC meeting on 26 June 1985 at HQ, AMC initiatives affecting MDMS and the Command Automated System for Procurement (CASPR) were discussed along with prioritization of the Information Management Plan (IMP) initiatives. The list of "near term" automation projects and initiatives surfacing at this meeting were carried forward for discussion at a further meeting 2 July 1985.[36]

(U) At the Release 70 IPR held 18 September 1985, prototyping at AVSCOM was approved. Most of Release 70 was designed to solve problems resulting from the separation of TSARCOM into AVSCOM and TROSCOM and the inability of the CCSS to handle collocated commands with common hardware, software, and master files. Through development of the Single Process Integrated Files (SPIF) modifications in Release 70 the standard system would have the ability to support multiple commands using a single execution of processes and applications with integrated files, queues, and databases. Proliferation of the Automated Autodin Interface also gained approval at the meeting.[37]

(U) AMC Near Term Initiatives. In FY84 the LSRC secretariate had developed a near-term automation project/initiatives package which was approved by the CG, AMC. On 16 November 1984, a prioritized package setting forth AMC's automation requirements from FY85 to FY91 was sent to the Office of the Under Secretary of the Army. This

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[34] Ibid. For more on the various system changes, see LSRC minutes maintained by AMCSM-PA.
[35] Ibid.
[36] Ibid.
[37] Ibid.

package was also used in the FY87-91 Program Analysis Resource Review (PARR), an Automation Program Development Increment Package being established as a result.[38]

(U) Standard Automated Systems Master Plan. STAMP was intended by the LSRC secretariat to be used as the LSRC master automation planning document for AMC standard systems. It was developed for use by headquarters and supporting agencies in developing logistics automation requirements for the Command Operating Budget (COB) and PARR. It was planned that STAMP would itself be automated as part of the HQ AMC Master Automation Plan.[39]

(U) Major Item Data Base. During FY85, AMC submitted a mission element needs statement and other required documentation for a secure network ADP system, a major Class III ADP project to support all major item systems, including such VCSA-directed initiatives as the Army decision support system and Documentation Modernization (DOCMOD). The project was put together so that it would fit into and support DA and AMC weapons plans for the 1990s and beyond. At year end, the project was in the hands of the senior functional policy official at DA, the ultimate approval authority.[40]

(U) Total Army Equipment Distribution Program - Modernization. On a smaller scale, the major item distribution system at DESCOM, Total Army Equipment Distribution Program (TAEDP), was well advanced into a modernization of hardware and software. The aim of the TAEDP-MOD program was to provide the stand-alone transaction-fed major item data base with interactive inquiry capability, reduce computer runtime, and otherwise enhance management capability.[41]

(U) War Reserve Automated Process. WRAP was developed by AMC to provide a standard automated capability to compute war reserve requirements for Class I-IV, VIII, and IX items of supply.[42] In FY85, the system development and testing for WRAP was completed. The program was used to compute the FY87 war reserve requirements for secondary items.[43]

(U) As an extension of WRAP, AMC started development of a Logistics Planning/Sustainability Automated Process for computing requirements for LOGPLAN (Logistics Planning), OMNIBUS/ALA (Omnibus

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38 Ibid.
39 Ibid.
40 Ibid.
41 Ibid.
42 FY84 AHR, HQ, AMC.
43 DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

Army Logistics Assessment), and ARES (Army Readiness Evaluation System). The requirements would be generated by use of the methodologies developed for WRAP. In FY85, the USA Materiel Systems Analysis Activity (AMSAA) completed development of further automation concepts along these lines.[44]

(U) Logistics Data Network Prototype. LOGNET developments continued at TRW in FY85, and work on such system enhancements as MOBERS, Artificial Intelligence, the Class IX timing study, and technical improvements to the menu screen were completed. The LOGNET Government Acceptance Test was completed in the first quarter of FY85 and both the TRW and Teledyne Brown Engineering contracts were extended during the year. The MOBERS enhancements were installed and the MOBERS Government Acceptance Test was completed in the third quarter of FY85 while its Demonstration and Evaluation Test was begun in the same quarter. The LOGNET draft functional description was completed and sent for staffing in the fourth quarter of the fiscal year.[45]

Maintenance Interservice Support Management Office (MISMO) (U)

(U) Interservice policies and procedures on depot maintenance were controlled through the Joint Logistics Commanders and the Joint Policy Coordinating Group on Depot Maintenance operating through MISMO.

Depot Operations Division (U)

(U) OMA Funding. Among other tasks, the Depot Operations Division managed OMA funding for the DCS SMT. This included P7S program elements relating to such concerns as packaging, storage, depot automation, and transportation, P3 program elements related to secure data transmission, and P7M program elements related to materiel maintenance and support. FY85 Obligations (in thousands of dollars) were as follows in these P7S and P3 AMCSM-Managed depot programs:[46]

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[44] Ibid.
[45] Ibid.
[46] Ibid.

Account		Direct	Reimbursable	Total
PE 721111	Supply Depot Ops	$576,876	$21,460	$598,336
PE 72112	Supply Mgt Ops	206,467	59,252	265,719
PE 722829.1	Program/Project Mgt	83,322	7,130	90,452
PE 722809	First Dest Trans	46,744	4,455	51,199
PE 728010	Second Dest Trans	58,105	2,665	60,770
PE 728012.2	Demilitarization	97,203	1,519	98,722
PE 728013	Overseas Port Activ	467	0	467
	Total P7S	1,069,184	96,481	1,265,665
PE 381011	Crypto Activity	2,834	0	2,834
PE 393401	Comm Security	19,667	715	20,382
	Total P3	22,501	715	23,216

(U) A number of these program elements had significant shortfalls. In PE 721111, Supply Depot Operations, the high priority activities of shipping and receiving at the depots were fully funded, but there were funding shortfalls in other areas such as inventory and rewarehousing. In addition, in FY85 the depots operated under a workyear ceiling and a cap on the dollars used to pay for workyears. As a result the depots were considered to be overstrength and a limited hiring freeze was imposed. These limitations also restricted depot mission accomplishments other than shipping and receiving.[47]

(U) In PE 728009 and 728919, first and second destination transportation funds, a significant shortfall in TACOM's first destination transporation funds was met by internal reprogramming and by additional funding from HQDA. PE 728012.2, demilitarization, suffered from a low priority and consequently had large unfunded requirements. Serious deficiencies were disclosed during the year in the demil and stockpile management, including major problems with storage of hazardous items and lack of proper accountability and control of demil assets. Recommendations to correct the deficiencies were to be implemented in FY86.[48]

(U) In the P7M area, the total FY85 program was $2.204 billion. The Depot Maintenance Overhaul/Conversion Program, PE 732207, accounted for nearly three-quarters of this amount, or $1.586 billion, up from $1.276 billion in FY84 due to increased expenditures related to the UH-1 helicopter, the M113 TOW program, communications/electronics, and the Hawk and Chaparral missiles.[49]

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[47] Ibid.
[48] Ibid.
[49] Ibid.

(U) Also part of the P7M area was PE 738017, Maintenance Support Activities, which ended the year costing $617.8 million. In FY85, emphasis within this program was on the sample data collection programs, the warranty program, technical assistance for new systems, and PIP engineering for M55 Rocket assessment, a mid-life PIP for the M110 howitzer, and the UH-1 helicopter's mast bumping problem.[50]

(U) DESCOM's management of national overhaul contracts for all MSCs came under examination as the alternative of having each MSC manage its own contracts underwent testing with MICOM as the prototype. At year end, the test was continued and proliferation to the other MSCs delayed so that a full-year evaluation could be made, including year-end close-out. Also, the delay would allow time for essential system changes to be made for the Maintenance Data Management System (MDMS). CECOM was developing the MDMS changes, and the prototype system was unable to handle the year-end close out automatically; the changes being made appeared to solve the problems so that proliferation of the system could occur to the other MSCs in FY86[51]

(U) Packaging. The AMC Packaging, Storing, and Containerization Center (AMCPSCC), located at Tobyhanna Army Depot, again looked at the world of Army packaging in FY85. In its review of industry, the study found that there were no new packaging initiatives which would have an immediate impact on the Army. As a group, industry was found to be increasingly reluctant to spend R&D dollars on packaging without some assurance of a payoff. Their adamant viewpoint was that design-oriented DOD packaging requirements kill breakthroughs that might occur if requirements were instead performance oriented. Problems associated with commercial packaging required consideration of relying instead on military levels of protection.[52]

(U) The study also identified a need for more training of active duty military and civilian employees at troop installations involved with packaging. Enlisted personnel in the supply career management field were found in need of additional formal training in packaging, and those so trained should be given an additional skill identifier to enable their assignment to units having packaging missions. Another conclusion was that there were inadequate numbers and distribution of mobile preservation and packing shops as well as general and direct support units worldwide. Packaging was an element said to need greater emphasis in the up-front ILS process during

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50 Ibid.
51 Ibid.
52 Ibid.

development. Also critiqued, administrative and procedural bottlenecks were found to arise from often conflicting packaging publications and data processing systems.[53]

(U) Performance oriented packaging (POP) was making inroads in FY85 in other than logistics studies. A recommendation by the United Nations Committee of Experts on the Transport of Dangerous Goods for a POP approach for hazardous materials was to be implemented by all signatory countries, including the US. In May 1985, the DOD Joint Packaging Coordinating Group (JPCG) established a joint working group to identify and recommend solutions for problems arising out of implementing the UN recommendations. Compliance with the UN-backed program would serve unencumbered movement of DOD hazardous materials. Early work by the group included development of a charter, a glossary, and a preliminary test approach. Also other government committees and agencies were contacted for appropriate coordination. Implementation of the POP approach in this area for all modes of transportation was anticipated by the end of the decade.[54]

(U) In another significant effort involving hazardous materials, AMCPSCC completed Phase I of a project to develop and field an automated system to identify all hazardous materials in the Army logistics system. This was an extensive review of all regulations, systems, controls, and on-going programs covering hazardous materials. Following this review, AMCPSCC proposed, and HQ, AMC approved, a plan to automate the identification of hazardous materials by using either the National Stock Number or the part number and manufacturer's code. This would include information on the type of hazard present and the type of storage and handling required for the hazardous material. Following the completion of Phase II, the information could be accessed either through electronic terminals or by microfiche by all potential Army and depot users.[55]

(U) Electrostatic discharges (ESD) continued as a packaging problem in FY85, yet steps undertaken in FY84 were continued in FY85 to bring the problem under control. The scope of the problem and answers to it have been identified, but follow-up with necessary training and equipment was needed. In FY85, information on ESD packaging was sent to the field through major commands. Where units advised they could not comply with AMC instructions for a heat seal bag or with MIL-STD-2073 provisions, stock numbers of ESD pouches usable as alternatives were supplied. AMPSCC published a purchase description for an ESD protective packaging work site and an ESD

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[53] Ibid.
[54] Ibid.
[55] Ibid.

field service kit, as well as an ESD Protective Packaging pamphlet, the latter to be republished as a numbered pamphlet. Further, LABCOM was given the AMC lead for ESD and was evaluating the ESD project plan.[56]

(U) In FY85 the Army developed a three-phase plan for implementation of MIL-STD-2073. Phase I was scheduled for completion by June 1986 and involved restructuring computer files to a standard and modifying software for all packaging applications to conform to the new files. Phase II, targeted for completion by FY88, related to design and construction of files of predetermined packaging code tables and the development of software for the automated generation of packaging records for items within prescribed weight, size, fragility, and composition limits. Phase III was to include the design and construction of computer tables for all packaging codes, with corresponding in-the-clear interpretations of packaging requirements. It would also include the design of software to generate in-the-clear packaging instructions on all computerized acquisition documents. In October 1985, the Joint Military Packaging Training Center started teaching a three-day course covering the MIL-STD.[57]

(U) Transportation. In early FY85 General Thompson directed that a one-time transportability review of selected systems be undertaken. Transportability concerned the relative ease of movement by appropriate means to the field or into a strategic location. Size and weight were prime factors affecting transportability, as these could rule out transportation by certain vehicles or aircraft. The review, covering 70 systems, was completed in March 1985. It resulted in a variety of recommendations to institutionalize transportability early in the design development and fielding process. The recommendations ran the gamut from organizational realignments to administrative and regulatory changes to operational actions. Some specifics included a reemphasis on current procedures for transportability, identifying engineering for transportability focal points in all PM offices and MSCs, and instilling a philosophy of "lightening up" equipment within requirements documents in making design choices, from conception throughout development.[58]

(U) In reporting the results of the study to the CSA, General Thompson noted that AMC and the Military Traffic Management Command (MTMC) had the authority to implement the study recommendations. AMC would continue its close coordination with the MTMC "to enhance strategic mobility and add lightness to the force."

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[56] Ibid.
[57] Ibid.
[58] Ibid.

The greatest need of AMC in this area, the CG stated, promising continued command emphasis, was to convince its people to "think small."[59]

(U) Within CONUS and as the Army focal point for two basic DOD transportation policy and procedural regulations, AR 55-355, Military Traffic Management Regulation,[60] and DOD 4500.32.-R, Military Standard Transportation and Movement Procedures (MILSTAMP), AMC helped coordinate revisions during FY85. The joint traffic management regulation revision actually began in March 1984, at the initiation of the MTMC which was seeking ways to make the regulation a more effective procedural document for CONUS transportation officers. The other regulation was reviewed at the March 1985 request of the Deputy Assistant Secretary of Defense for Logistics and Materiel Management (DASC L&MM) to determine what changes were necessary to allow DOD traffic managers to take advantage of opportunities presented by deregulaton of the carrier industry. AMC, representing Army, assisted in developing changes that allow negotiation with carriers for movement of freight and for routing of full truck and carloads without prior coordination with MTMC area commands.[61]

(U) FY85 saw the continuation of a trend toward increased security in transporting sensitive materiel. In July 1984 the concept of constant surveillance services (CSS) was adopted as the minimum criteria for protection of sensitive conventional arms, ammunition, and explosives (AA&E) and for confidential classified shipments. Commercial telephone numbers by which points of contact could be reached both at the origin of the cargo and at its destination were required to be included in the government bills of lading so that commercial carriers could obtain needed help.[62]

(U) In February 1985 the MTMC established an 800 number which commercial carriers could call toll free in the event of accidents or other incidents involving transportation of sensitive materiel in the continental US. The following March saw strengthening of category I missile criteria to require use of cleared and armed carriers whose drivers were trained in security. Other actions included the distribution of an Army Transportation School video tape in April for training at Army installations, the September direction to consignees

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[59] Ibid. Ltr, General Thompson to General Wickham, Subj: [Transportability], 10 May 1985. For action taken in FY84 on this issue, see the Materiel Readiness Chapter of the FY84 AHR.

[60] This regulation had different designations for the various branches and the Defense Logistics Agency.

[61] Ibid.

[62] Ibid.

Ibid.

having safe havens to receive and secure munition vehicles regardless of what hour they might arrive, and the decision, also in September, requiring two drivers (Dual Driver Protective Service) for CONUS shipments of category II through IV AA&E.[63]

(U) Area Oriented Depot Modernization. Plans to modernize the three Area Oriented Depots (AOD) called for work to commence at the Sharpe Army Depot in FY85, New Cumberland Army Depot in FY86, and Red River Army Depot in FY87. Congressional interest had moved plans for the NCAD ahead of RRAD, but all three depots were planned to be such as would support the modern Army through the 1990's and into the 21st Century. Each depot would have three major integrated elements, an automated materials handling system, a management and control system, and a consolidated facility where all major functions are performed under one roof.[64]

(U) Plans that had been in development extending back into the '70's were to answer the projected mission growth associated with the greatest force modernization since World War II. Existing facilities regularly working two and sometimes three shifts to accomplish their peacetime mission would be required to work nearly three full shifts by 1990. To be ready for mobilization requirements, the new facilities were to be designed to handle peacetime work in a single shift, the slack time being available for equipment repair, surges, or, if needed, war mobilization. Another consideration going into the modernization was the age both of the equipment and of the ADP system, the former subject to increasingly frequent breakdown after 40 years of use and the latter affording only "historical" rather than real time information.[65]

(U) The Sharpe project gained congressional approval and requests for proposal were advertised by the COE in Sacramento. The bidder response to the proposal indicated initially that the OPA funding would be short by $26.6 million, but more detailed analysis found that $19.6 million could be financed from OMA money, and the remainder was within AMC's reprogramming authority for OPA, an issue being examined by the DCS for Resources Management.[66]

(U) NCAD Stock Relocation. As a result of congressional interest, the construction of an Eastern Distribution Center (EDC) at New Cumberland Army Depot (NCAD) gained approval in FY84 to begin in

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63 DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

64 Ibid.

65 Ibid. Conversation 16 Jan 87, Iriving Levine, AMCSM-PO.

66 DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

mid FY85. About that time, however, the Corps of Engineers found a major fault line running below the site originally selected for the EDC. The only possible alternative site was occupied by two large warehouses and two sheds, all filled to capacity. As the remaining depot facilities were already at 94 percent occupancy, AMC undertook relocation of dormant and slow-moving stocks to Letterkenny, Seneca, and Lexington-Bluegrass Army Depots, completing the project in March 1985. In all, some 11,598 short tons were moved, 47,360 line items, freeing 320,928 square feet of covered storage. Additional space was kept free by diverting 262 incoming shipments to other depots.[67]

(U) Automated Warehousing. The LOGMARS (Logistics Application of Automated Marking and Reading Symbols) program used machine-readable bar codes in much the same way the supermarket industry used the Universal Product Code (UPC). A variety of logistics applications for LOGMARS included such processes as shipping and inventory. The total AMC LOGMARS program was estimated to cost $21 million and was to be fully implemented at 196 sites by the end of the first quarter of FY87.[68]

(U) AMC applications of LOGMARS and the dates by which they were or were projected to be implemented were as follows:

AMC Application	Actual/Projected Completion Date[69]
Automated Self Service Supply Center	Oct 83
Maintenance Shop Floor System	Nov 83
Installation Equipment Management Bar Code Inventory System	Feb 84
Ammunition Shipping	Dec 84
Physical Inventory/Location Survey/ Quality Inspection	Apr 85
Ammunition Inventory/Location Survey	Apr 85
Intransit Visibility for ALOC Shipment Test (Europe)	May 85
Wholesale Shipping	Nov 85
Wholesale Receiving	Nov 85
Automated Total Control/Inventory System	Feb 86
Total Packaging/Unit Material Fielding	Jan 86

(U) AMC was the Army lead in the LOGMARS Documentation Subgroup. On 9 June 1985, the group agreed on a bar coded version DOD Form 1387, Military Shipment Label, and on 24 October 1985 they

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[67] Ibid.
[68] Ibid.
[69] Ibid. Dates as of Nov 85.

agreed on two bar coded versions of DD Form 1348-1, a requisition form, one for Navy having nine element codes and one with seven element codes for everyone else. They were to be used on a limited basis in 1986 as part of the Wholesale Shipping application.[70]

(U) The ammunition shipping application was completed in FY85 on a priority basis. The program was approved by DA on 22 June 1984 and was completed on 11 April 1985, with installation of the ammunition bar coding equipment at Sierra Army Depot, the last station to be equipped. The first equipment delivery had occurred in September 1984, and the first site in operation was in December 1984. Completion of the program at $1.3 million allowed AMC to provide all of its military customers with bar-coded ammunition, conforming to MIL-STD 129J, 25 September 1984.[71]

(U) Maintenance Shop Floor System. Maintenance management automation in depot maintenance shops fell under the Maintenance Shop Floor System (MSFS), a project approved 12 June 1985 and put out for bid at the end of the fiscal year. The system was expected to be installed at Corpus Christi, Anniston, Red River, Tooele, Sacramento, Tobyhanna, and Letterkenny Army depots.

(U) Automated Storage and Retrieval System. The Automated Storage and Retrieval System was planned as an enhancement of MSFS to be installed six months later. It was to be a state-of-the-art system for processing and controlling parts/materiel used to support the rebuilding of combat vehicles and missile system for the Army. It would use mini-stackers for storing small items, pallet stackers for pallet loads of up to 2,000 pounds, cantilever racks for long items such as bar stock and sheet metal, and open storage for items too large to fit elsewhere. The peripheral data management equipment in the system included line printers, data entry terminals, and bar code printers and scanners.[72]

(U) Tires. TACOM was tasked to establish a system by which tire manufacturers would store and issue standard size tires, relieving Army of that function. A model by which customers would use the GSA Federal Supply Schedule and not involve TACOM proved infeasible and not cost effective when scrutinized, however. Subsequently, it was decided that an electronic ordering system used in the Defense General Supply Center for the delivery of film and light bulbs could be adapted as the TACOM Order Placement System (TOPS) for the direct order and delivery of standard tires. To make

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[70] Ibid.

[71] Ibid. For more on the LOGMARS program, especially on ammunition, see the FY84 AHR.

[72] Ibid.

the system work, however, TACOM needed to deviate from the OMB Circular A125 requiring positive proof of delivery before fast pay procedures could be used to pay the vendor. OMB subsequently issued an Attachment 2 to Circular A125 permitting payment on vendor certification of shipment under circumstances that appeared to satisfy TACOM's need.[73]

(U) Property Disposal Restraints. First DOD and then HQ DA placed constraints on movement of material to property disposal. This FY85 development resulted in significant impact to the depots, exacerbated by storage requirements for new weapon system stock, but was undertaken following disclosure that valuable material had slipped through for disposal. By 30 September 1985 DESCOM depots held 20,851 line items of wholesale stock graded category H--unserviceable/unrepairable--worth $465 million and occupying about one million square feet of floor space. In June, the overall storage space occupancy rate had already reached 87 percent versus the 85 percent that yields optimum efficiency. Area Oriented Depots were at 94 percent occupancy levels.[74]

(U) Core Logistics. The FY85 DOD Authorization Act required the Services and the Defense Logistics Agency to report to Congress by 1 April 1985 their core logistics functions. Identification of these functions would mean that, according to OMB Circular A-76, they would not be contracted out. AMC identified a wide range of specific functions, equipment, and facilities that it considered to belong in-house, submitting its response to DA. The AMC position was the basis of DA's response to DOD and was similar to responses of the other Services. DOD's reply to Congress limited core logistics capability to include only facilities, equipment, and management personnel. Although criticized in the House Armed Services Subcommittee on 3 April 1985 as being nonresponsive, no further congressional direction was given, and present Army documentation on the matter reflects the DOD position.[75]

Honduras (U)

(U) To enhance logistical support to forces in Honduras, NCAD began shipping supplies to the Charleston APDE for airlift under the Remote Area Support (RAS) concept which was already in use for Okinawa, Turkey, Italy, and the Virgin Islands. The change meant a seven day reduction in the time taken to fulfill an order.[76]

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[73] Ibid. Federal Register, Vol 50, No. 71, 12 Apr 85, pp. 14688-14689.
[74] Ibid.
[75] Ibid.
[76] Ibid.

(U) In one episode of support for forces in Honduras, FORSCOM requested immediate help for the 224th Military Intelligence Battalion in the form of three airfield tugs and two maintenance shelters. Since they could not be supplied through the wholesale system, AMC granted local purchase authority and gave funds to DA which in turn were transferred to FORSCOM. By the end of the fiscal year the tugs were in place while the shelters were split between a shipment on the way to Honduras and a remainder in storage in Charleston, SC, waiting site approval by the Honduran government.[77]

Republic of Korea (U)

(U) Increased support to the Eighth Army in Korea (USAEIGHT -EUSA) came in FY85 when AMC assumed contract management functions.

Electronic Data Interchange of Government Bills of Lading Data (U)

(U) NCAD was the DA participant in a DOD test of computer-to-computer interchange of information on government bills of lading.[78]

Chemical Agent Resistant Coating (U)

(U) The HQ DA September 1982 decision to adopt chemically resistant coatings on Army equipment coincided with the decision a few months later to adopt the German three-colour camouflage pattern. Funds were not available for widespread implementation in FY84 or '85, however, so CARC and camouflage pattern painting (CPP) on a regular basis was planned for new equipment and equipment going to depot repair in FY86, although systems which could generate the funds earlier were requested to do so. The 1 October 1985 implementation date for CARC/CPP did not proceed smoothly. AMC tasked TROSCOM to carry forward with existing resources. Major problems encountered were caused by the lack of paint facilities meeting federal safety standards under the Occupational Safety and Health Act (OSHA) and user hesitancy in applying CARC. Limited funding delayed implementation of the program, but AMC facilities in general possessed the capability to apply CARC.[79]

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77 Ibid.

78 Ibid.

79 Ibid. Msg, DAL-SMP, Subj: Army Adoption of CARC, 061547Z May 83. For early history of this program, see BY84 AMC AHR.

Inventory Management Policy Division (U)

(U) Organization. The Inventory Management Policy Division was established 13 May 1985 to "direct the establishment of policies, procedures, systems, plans, goals, and objectives governing requirements determination, asset reporting, and associated documentation and programs." It was divided into two branches, the Major Items Policy Branch and the Minor Items Policy Branch, each branch being further divided into teams. The major items branch, for example, had a team on Prepositioning of Material Configured to Unit Sets (POMCUS), while its sister had a war reserve team.

(U) Equipment Release Priority System. In June, AMC was able to replace the Requisition Validation (REQ VAL) system with ERPS, the Equipment Release Priority System. The new system promised to eliminate checking of multiple sources in assigning major equipment items and eliminate a good deal of the confusion item managers might otherwise encounter ensuring that units with bona fide equipment shortages receive equipment based on the highest directed priority.

(U) Major Item System Mapping. A data bank being compiled in FY85 linked major end items to the system in which they operated. Called "Major Item System Mapping," the data base was to be an automated element of Army Materiel Plan Modernization that would permit a change from managing individual items to managing total systems. Problems of integrating major end items into their system were expected to be alleviated. Also, because funding was usually by system rather than end item, a conformity would be achieved there as well. By the end of FY85, a partial data bank had been completed, and testing of the system was anticipated in FY86.[80]

(U) POM/Budget Synchronization of Spares and Repair Parts. This HQ DA DCSLOG-directed project was an attempt to compute spares and repair parts for six major programs by using the same major item assumptions for distribution, operational tempo, and failure for all aspects of the program including initial and replenishment, depot maintenance and war reserves. The six programs included in this were the M1/M1A1 Abrams tank, M2/M3 Bradley, AZ-64 helicopter, UH-60 helicopter, Patriot, and SINCGARS. The Secondary Items Policy Branch, Inventory Management Policy Division, carried out AMC's role in the program, which was to supply input for baseline cost estimates for the FY88-92 POM.[81]

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[80] Ibid.
[81] Ibid.

(U) Subject Matter Assessments. Separate Subject Matter Assessments of spare/repair parts requirements determinations and of war reserves were conducted. In these SMAs the procedures and policies followed in the Materiel Management Directorates of the commodity MSCs were reviewed with the intent of identifying, and eventually spreading throughout the command, the most efficient techniques and organizational structure.[82]

(U) Support List Allowance Card Enhancement. During FY85 gains were made in reducing the secondary item inventory carried by field units under the Support List Allowance Card (SLAC) process without degrading readiness. The SLAC Enhancement initiative was carried out through a functional process assessment (FPA) by MRSA, the MSCs, and HQ AMC to identify problems in SLAC policy, procedures, and automated systems, to recommend corrective action, and to establish milestones for implementing corrective actions aimed at eliminating excess generation of support items. Changes were made as a result of the initiative and the FPA throughout AMC and were to be included in a new Army regulation, Materiel Release, Fielding and Transfer.[83]

(U) War Reserves Automated Process. In May 1984, the War Reserve Automated Process was implemented as a standard baseline procedure for the entire war reserve community. Interface with all field activities was standardized and implemented early in 1985. The first WRAP cycle was completed in April 1985 and the second cycle, which identified the FY88 war reserve requirements, was completed in October 1985.[84]

Materiel Distribution Management Division (U)

(U) Central Demand Data Base. Individual repair part demands were to be collected into a centralized Army data base, complete with a three position end item code (EIC) placed on each demand document at the retail level, to enable accurate identification of repair parts consumption by specific type of end item. Milestone II approval for the program was given 20 September 1985 by the Assistant Secretary of the Army (Financial Management), with implementation expected by November 1986.[85]

(U) Excess Materiel/Returns/Disposal Programs. A number of important changes were made in programs dealing with the disposition of excess materiel, it having been disclosed that within DOD valuable and needed equipment had been disposed of as surplus. Implementation

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[82] Ibid.
[83] Ibid.
[84] Ibid.
[85] Ibid.

of the Army's Retention and Transfer Enhancement (RATE) plan and of AMC's Materiel Excess, Redistribution and Disposal Improvement Program (MERDIP) aided in the maximum utilization and reutilization of materiel. Changes were made in the numerical retention stockage level so that assets would be retained above the contingency retention level if management decided that the items would have potential use. This insured the retention of repair parts that supported end items which were projected to remain in the Army system for the next five years or which had been procured within the last three.[86]

(U) Two changes in the Commodity Command Standard System (CCSS) also helped eliminate the possibility that useful materiel would be disposed of. One change provided for the return to the wholesale level of items that were repairable at the direct support and general support levels. This insured that items which could not be repaired at the retail level would be returned to the wholesale level for repair and return to stock. The second change to the CCSS prevented the automatic generation of disposal release orders, requiring specific approval of the item manager and the appropriate supervisor for such orders.[87]

(U) Another change which helped insure control over all surplus materiel was the elimination of dollar value criteria for reporting excess materiel, henceforth ensuring that the item manager would be informed of all excess materiel regardless of dollar value.[88]

(U) Two major programs were implemented that dealt directly with the return and reutilization of Army-owned assets. The first dealt with Army-owned assets managed by either DLA or GSA. It resulted in the reutilization of materiel that would otherwise have been disposed of by those two agencies. The second program expedited flow of excess materiel from the Army in Europe to CONUS, thus increasing the availability of assets.[89]

(U) Special Activities Support. AMC supply support was furnished the 1985 Boy Scout Jamboree held at Fort A.P. Hill 24-30 July 1985. The 1985 US Military Academy Summer Training program was also supported by the equipment that was loaned to the Academy for the training program and then returned to the depot. AMC furnished equipment on loan to law enforcement agencies in California, the Third Marine Corps Air Station, and the FBI in

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86 Ibid.
87 Ibid.
88 Ibid.
89 Ibid.

support of the 1984 Summer Olympics in Los Angeles. The Defense Logistics Agency and two AMC MSCs, AMCCOM and CECOM also provided support.[90]

(U) Direct Support System/Air Lines of Communications. The Direct Support System (DSS) was a program in which bulk shipments of spare parts were consolidated and shipped directly to the requisitioning units. In FY85, 13 units were removed from DSS while 19 were added, 12 in CONUS, five in Europe, and two in Korea. In addition, several units were added to the DSS as a remote support area. This included Army Reserve and Army National Guard in Guam, and units in the Virgin Islands and Johnston Island. At the end of the fiscal year, AMC was planning to add another 25 CONUS and National Guard units to the DSS and to add Honduras to the remote support areas serviced by DSS, both for exercise supply requirements and a test of support for an expeditionary force.[91]

(U) As noted above, FY85 saw the beginning of land-clearing efforts at the New Cumberland Army Depot for the Eastern Distribution Center. Also at NCAD, the Consolidation and Containerization Point (CCP) was converted to government operations. Prelodge, a system of scheduling deliveries to the CCP, reduced demurrage costs and allowed better manpower use at New Cumberland.[92]

(U) AMC made a case with GSA in October 1984 for elimination of the 8 percent surcharge that GSA assessed on equipment shipped to Army overseas customers. The following March, GSA cut its surcharge to 6 percent (at a savings to Army of approximately $1.5 million per percentage point) and set October 1985 as the date for any further reduction.[93]

(U) GSA increased the number of its lines of equipment at Sharpe Army Depot by 20, to a total of 350 lines in support of Army customers in the Pacific. Due to modernization constraints, the GSA lines at NCAD remained steady at 117. Generally during FY85, GSA supply performance was slow, reaching the highest order ship time (OST) in three years, primarily due to depot closures and excessive intransit times to NCAD CCP.[94]

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90 Ibid.
91 Ibid.
92 Ibid.
93 Ibid.
94 Ibid.

(U) The use of Air Lines of Communication spread in FY85. In February, the Army Materiel Systems Analysis Activity (AMSAA) published a study that supported ALOC and recommended its expansion as effective in reducing order ship time (OST) and comparing favorably in actual costs versus surface transportation. In FY85 seven units were added to the ALOC program--one in Europe and three each in Puerto Rico and Panama--while two units were removed from ALOC. The NCAD suggested the REFORGER 85 ALOC in which tactical delivery was made of specially configured and identified ALOC pallets to a forward airfield in Germany. This exercise, held in January 1985, was followed by an April conference with the Military Airlift Command (MAC) on ALOC. The table on the following page summarizes the gain in OST by ALOC to various destinations.[95]

(U) Rapid Army Priority Item Distribution System II. A much shorter OST was needed for those repair parts needed to bring deadlined combat systems back into operational status. RAPIDS II, which aimed for a nine-day OST for such parts, had been tested in Europe in CY84, gaining approval in a modified form after achieving average OST times on the order of 12.1 days in the latter half of the year. It was being considered for adoption as a worldwide system. In FY85, it achieved a low of 9.8 days OST in April, and maintained OSTs in the 10-12 day range throughout the year. In June MAC replaced the expensive commercial air carrier used during the testing phase and experienced no degradation of support. By the end of the year, RAPIDS II materiel was being flown on a daily basis from McGuire Air Force Base, New Jersey, to Rhein Main Air Base in Germany.[96]

(U) Cataloging Subject Matter Assessment. AMC's Management Engineering Activity conducted a Subject Matter Assessment (SMA) of the MSC cataloging function, establishing a standard mission, functions, and organizational structure for cataloging. Based on the standardization, model job descriptions were developed for non-supervisory and non-administrative positions. Implementation of the standard cataloging organization and its 21 enhancements was approved on 2 April, the changes to go into effect in December 1985.[97]

(U) AMC Army Master Data File Product Enhancement. Underway in FY84 was a comprehensive plan by which AMC, working with the USA Logistics Center and the USA Logistics Evaluation Agency, would improve the accuracy and utility of the Army Master Data File (AMDF).

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[95] DCS for Supply, Maintenance and Transportation, FY85 AHR Submission.
[96] Ibid. FY84 AHR, HQ, AMC.
[97] DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ, AMC.

FY85 Average Order Ship Time Under DSS and ALOC
(in days)

	Army		Defense Logistics Agency		General Services Admin.	
	DSS	ALOC	DSS	ALOC	DSS	ALOC
Europe	57.3	23.7	55.0	23.7	78.2	38.6
Korea	50.5	25.8	54.0	27.6	71.2	43.2
Caribbean	55.6	24.8	61.7	27.7	73.9	----
Hawaii	42.5	23.5	43.2	24.9	58.9	
Japan	----	20.1	----	22.0	----	----
Alaska	39.6	24.0	47.1	24.6	62.5	----
TRADOC	21.3	----	23.5	----	28.7	----
FORSCOM	21.7	----	24.2	----	30.6	----

Called AMC AMDF Product Enhancement (AMCAPE), steps taken in FY85 included completion of the confidence level sample and corresponding corrective actions, completion of weight and cube data for war reserve items, determination of AMCAPE posting accuracy, establishment of data element responsibility, development of an AMC regulation for conducting the total item review, completion of data element utility determination, the start of front end edits, the start of a study to distribute data by weapons system, and reduction of AMDF surveillance errors.[98]

(U) Serial Number Tracking. A standardized serial number tracking (SNT) program was created in response to piecemeal demands from higher authorities that various weapon systems had SNT programs to track certain high cost components.[99] There were two SNT programs in effect. One was the DOD Small Arms Serialization Program (DODSASP) which was being applied in FY85 to track controlled cryptographic items. The other SNT program was the Army Intensive Managed Item-Expanded (AIMI-X).[100]

(U) Physical Inventory Program Enhancement. The objectives of the AMC Physical Inventory Program Enhancement (PIPE) plan were to improve inventory record accuracy and physical inventory controls at inventory control points (ICP) and depots. Implementation of the plan continued in FY85. On 14 January, AMC Regulation 740-17, Storage and Supply Activities: Inventory Accountability was issued. Prototype testing of the general supply and ammunition inventory application of LOGMARS was completed at the depots in New Cumberland and Tooele. TSM Corporation undertook a contract study of inventory training. Projected for FY86 was the spread of LOGMARS to all storage sites, the completion and implementation of the SMA on inventory functions at MSCs, and approval of a system concept for the redesign CCSS inventory process. During the year, DA, Deputy Chief of Staff for Logistics, was briefed on progress of AMC's overall inventory posture.[101]

(U) Also in FY85, a functional process assessment was undertaken for the CG to lay down the processes involved in AMC's physical inventory program and study it for areas of improvement. The laydown covered policy, procedures, and automated systems, and was presented to the Commander on 11 September 1985. Areas found for

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[98] Ibid.
[99] AMC AHR, FY84.
[100] DCS for Supply, Maintenance and Transportation, FY85 AHR submission, HQ AMC.
[101] Ibid.

improvement included clarification of policies and procedures for contractor accountability, updating procedures to account for items on loan, requiring a physical count when an audit or investigative agency identifies a shortage (although looking for ways to reduce the number of physical inventories), and developing a technique to validate reports.[102]

Weapon Systems (U)

Command, Control, and Surveillance Systems Division (U)

(U) The Command, Control, and Surveillance Systems Division, (AMCSM-WC), came into being on 15 May 1985 to manage the OPA appropriations for communications, electronics, surveillance, target acquisition, survey, and physical security equipment. In all, it was given 192 budget lines, the FY85 OPA budget which was approximately $2.5 billion. Concerned with the life cycle materiel management functions associcated with acquisition, support, and disposal of command, control and surveillance weapon systems and equipment, it operated through two branches, one for command and control systems and the other for surveillance equipment.[103]

(U) Command and Control Branch. Budget reviews, ILS meetings, command reviews, and the like occupied the Command and Control Branch during FY85. Specific systems requiring special attention during the year included: TACFIRE, Battery Computer Systems, Mobile Subscriber Equipment, Remotely Piloted Vehicle, SINCGARS, and Regency Net. Others were a range of non-developmental items, batteries, the Global Positioning System (GPS), Single Channel Objective Tactical Terminal (SCOTT), and Short Range Air Defense Command and Control (SHORAD C^2). In addition, the branch was involved in the transition of other systems from developing commands and PMs.[104]

(U) Also, a great deal of attention went toward a Battlefield Communications Review and a revamping of the Army Signal Battalion's communication architecture. Eventually, the changes begun were expected to completely revise the Army's tactical communications. As a further task, the branch was given responsibility for ILS support for the Army Space Program.[105]

(U) Surveillance Equipment Branch. Systems given special attention during FY85 that fell within the ambit of the Surveillance Equipment Branch and its predecessors included: Firefinder Radars

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[102] Ibid.
[103] Ibid.
[104] Ibid.
[105] Ibid.

AN/TPQ-36 and 37, Teampack AN/MSQ103-A, Ground Vehicular Laser Locator Designator (GLLD), Trailblazer AN/TSQ-114A, Radiac Meter IM-185/OD, Electronic Test and Repair Station AN/MSM-105, Joint Surveillance Target Attack Radar (JSTARS), and All Source Analysis System (ASAS). Similar work went into guiding the life-cycle support for various communications security (COMSEC) equipment, night vision devices, and installation kits for radios. The emphasis on life-cycle management was enlarged during the year with assumption of management responsibility for depot overhaul of assigned equipment.[106]

Aviation and Missile Systems Division (U)

(U) Worldwide Aviation Logistics Conference. A worldwide aviation logistics conference was held at AVSCOM from 1 to 5 April 1985 with representatives from all the MACOMs as well as from the Army staff. The conference reviewed/established production deliveries, depot maintenance, modification programs, and distribution schedules for all types of aviation equipment. It was also agreed for the first time that the UH-1 would be considered for war reserve storage in Europe.[107]

Vehicle and Troop Support Division (U)

(U) This division was formed in May 1985 when the Command, Control, Surveillance and Support Systems Division was split in two. The Vehicle and Troop Support Division was itself divided into a Vehicle Systems Branch and Troop Support Branch, with the assigned systems and resources being realigned in June 1985. The division served, for assigned weapons systems, as the weapon system support office through the weapons production phase and as the weapon system staff manager from transition into operation through final disposal.[108]

(U) In FY85 the division was also tasked to manage Product Improvement Programs and the Depot Maintenance Program for assigned weapons systems, as well as the Logistics Unit Productivity Study program (LUPS). The division was responsible for managing the OPA appropriations for activities 1 and 3 (vehicular equipment and other support equipment, respectively). This consisted of approximately 140 budget lines and the FY85 appropriations for them of $1.3 billion.[109]

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[106]Ibid.
[107]Ibid.
[108]Ibid.
[109]Ibid.

(U) The items assigned to the Troop Support Branch consisted of TROSCOM-managed OPA 3 equipment, such as fuel and lubricants (POL), POL distribution equipment, water distribution and purification equipment, mobile power sources, Army watercraft, shelters and containers, air conditioning and heating systems, surveying equipment, railroad equipment, bridging equipment, training devices not unique to particular weapon systems, combat field feeding systems, bakeries, shower and bath units, and cargo airdrop equipment. The items assigned to the Vehicle Systems Branch consisted of TACOM-managed OPA 1 and 3 equipment and AMCCOM-managed OPA 3 funded equipment. This included tactical and nontactical vehicles, commercial construction equipment, materiels handling equipment, chemical equipment, countermine equipment, and shop equipment.[110]

(U) Rigid Wall Shelter Plan. A plan for the management of rigid wall shelters was prepared by the division and approved by the CG, AMC and by HQDA. Highlights of the plan included provision that shelters be authorized as components of higher assemblies, that they be fielded as a separate line in OPA 3 budgets, that they were to be centrally managed through interchange by TROSCOM and that the management of the S250 and S280 shelters was to be shifted from CECOM to TROSCOM.[111]

(U) Commercial Generators. At the direction of the VCSA, AMC undertook testing of quiet commercial generators for corps and division tactical command posts. In FY85 tests at Fort Hood, quiet commercial generators demonstrated that they could perform as required at the command posts. The VCSA then approved a plan to acquire such generators on a competitive basis.[112]

(U) Tugboat Study. In FY85 the "Army Tugboat Requirements, Logistic Civilian Augmented Program (LOGCAP) and Organic Study" was completed and briefed to the VCSA, who approved purchase of two large tugs in FY87 and an additional 11 large and 10 small tugs during the FY88-92 program years.[113]

(U) Watercraft Program. The Army's OPA 3 watercraft program for FY85 budgeted $58 million to procure one logistics support vessel (LSV), two floating causeways, two utility landing craft (LCU), and two roll on/roll off platforms. Only the LSV, however, was contracted for during the year, and that contract (which also

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[110] Ibid.
[111] Ibid.
[112] Ibid.
[113] Ibid.

involved some FY84 funding) was later cancelled for the convenience of the Government and was to be resolicited on a competitive basis in FY86.[114]

(U) Automatic AUTODIN Interface. In May 1982 the then Directorate for Supply, Maintenance and Transportation developed a concept for a direct communications link between AUTODIN switching centers and the CCSS which the MSCs used, thus avoiding routing of logistics communication traffic through the local telecommunications center. In August 1982 the Directorate for Management Information Systems was directed to develop such a system; two and a half years later in January 1985 it was installed at AVSCOM for trial. Following certification by the Defense Communication Agency in April, the system proved out in trials that lasted until August 1985. It was next installed at TACOM in August, becoming operational the following October, subsequently to be followed at the other commodity commands. When fully operational it would cut inventory control point processing time by 12 hours and open the way for real time processing of requisitions.[115]

Materiel Distribution Policy Branch

(U) Materiel Return/Excess Materiel Program. A number of improvements were made in 1985 in managing excess or returned equipment. The Army's Materiel Excess, Redistribution and Disposal Improvement Program (MERDIP) were both implemented to improve the use of resources and to obtain maximum use of equipment inventories onhand.

Executive Director for Conventional Ammunition (U)

(U) AMC's Office of the Executive Director for Conventional Ammunition was the single manager for the Department of Defense, charged with obtaining for the conventional ammunition program "maximum procurement efficiency and effectiveness, maximum integration of the various Service's logistics functions consistent with efficiency and effectiveness, and the maintenance of production and logistics bases capable of meeting peacetime, surge, and mobilization requirements." This responsibility had been delegated to the Army by DOD Directive 5160.65, and the Secretary of the Army had redelegated the authority to perform this mission to the Commanding General of AMC, who in turn had designated the AMC Deputy Commanding General for Materiel Readiness as the Executive Director for

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[114]Ibid.
[115]Ibid.

Conventional Ammunition (EDCA). He in turn was supported by a Deputy Executive Director and an office devoted to the Single Manager for Conventional Ammunition mission.[116]

Procurement (U)

(U) Overall, FY85 was a good year for procurement by the SMCA with a number of significant improvements over past years. An obligation rate of 85 percent was achieved. In part this was due to "short-of-award" actions but another major cause was that over 80 percent of the total DOD ammunition procurement budget was transferred from the Services to the SMCA by the end of the first quarter. This was achieved by closer coordination and management attention on the part of the Services and DOD, and was also helped by the fact that the Appropriation Bill for FY85 was passed unusually early in the fiscal year (12 Oct 1984 compared to December dates for the preceding three fiscal years).[117]

(U) Procurement policy in FY85 placed emphasis on including in contracts the capability for surge production during an emergency. Every FY85 "new private sector solicitation included a single surge option clause covering increased quantities and accelerated deliveries." Other procurement initiatives that SMCA pursued included ways to give customers incentives for efficient procurement and production, methods to separately finance and account for the costs of maintaining a mobilization base, and ways to reduce the proliferation of munition types within each ammunition family.

(U) One area in which procurement performance declined in FY85 was in the awarding of multiyear contracts, with no such contracts being awarded during the fiscal year.

(U) The major reason for this lack of performance was the reluctance of contractors to accept the risks of long term price commitments. The result has been generally no price breaks associated with multi-year procurement quotes compared to single year quotes.

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116 Unless otherwise cited, the source for the section on the SMCA is the Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 85.

117 The dates Congress passed Appropriation Bills was taken from Office of the Director for Conventional Ammunition, Report on the Study of Ammunition Procurement Program Instability, 31 May 1985, p. 23.

ICAPP (U)

(U) Integration of the various Service's ammunition procurement needs was accomplished in the Integrated Conventional Ammunition Procurement Plan (ICAPP). This multivolume document was prepared by a ten-person office assigned to AMCCOM's Productional Directorate. Originally used as a POM review document, the date of publications was changed in FY84 to 1 October to allow it to be used instead as an analytic tool during the budget review cycle. Thus the ICAPP being developed in FY85 was published on 1 October 1985. It contained detailed analysis and recommendations on the Services' eight-year ammunition procurement plans for the period from FY84 to FY91.[118]

(U) A detailed review of the ammunition procurement programs submitted by the four Services resulted in 60 recommendations for changes, 43 of which had been accepted by the Services concerned and seven of which were still being reviewed when the ICAPP was published.

(U) The recommendations concerned program consolidations, sometimes combining the purchases of two Services so that they could be ordered in economic quantities, substitutions of one item for another, and improvements in financial or acquisition management. The Annual Report of the Executive Director for Conventional Ammunition stated that the 70 acceptance rate by the Services of the ICAPP recommendations was a substantial improvement over the acceptance rates of previous years.

(U) In addition to these recommendations, which were based upon specific line item requests, the ICAPP also made some general comments and recommendations concerning general categories of ammunition, the most significant of which are discussed below. In the category of small arms through 20mm the ICAPP noted concern over the large amount of undelivered ammunition. One specific problem area further singled out for discussion was the failure of out-of-CONUS sources to supply the required ammunition, and the ICAPP stated that "the continued use of OCONUS sources, which seem non-responsive to customer needs, does not fulfill the objective in the DOD Directive 5160.65 (paragraph D.2.a.), 'achieve the highest possible degree of efficiency and effectiveness . . . . '" Although

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118 Executive Director for Conventional Ammunition, Annual: Progress and Status of the Single Manager for Conventional Ammunition, Nov 85. Unless otherwise stated, the following discussion of the ICAPP is taken from the Integrated Conventional Ammunition Procurement Plan, FY84-91, Budget Year-87, 1 Oct 85, Part I: Executive Summary and Part II EDCA Analysis of ICAPP.

FY84-FY91 ICAPP Recommendations

Service	Total Recommended	Accepted	Implemented	Further Consideration
Army	15	11	6	3
Navy	27	17	6	4
Air Force	13	10	5	0
Marine Corps	5	4	3	0
Total	60	42	20	7

Note: Some recommendations were repeated for two or more services and therefore were counted more than once.

Source: Integrated Conventional Ammunition Procurement Plan, FY 84-91, Budget Year-87, Part II, page 2.

not stated in the actual recommendation, a review of the individual line items indicates that Israel was the primary offender in this area. The ICAPP recommended that the Single Manager for Conventional Ammunition "perform an in-depth review of undelivered requirements to determine causes and develop solutions" to the overall problem of undelivered ammunition. It also recommended that the Single Manager "energetically attempt to use production sources which can satisfy customer requirements based upon previous on-time deliveries."

(U) In the 25mm to 64mm ammunition section no major problems were discussed, but the ICAPP did note that the Army was transferring the responsibility for 25mm munitions from PM Bradley to AMCCOM, although responsibility for the gun was to remain with PM Bradley. It also noted that "requirements for Sgt York ammunition are subject to change because of the termination of the weapon system."

(U) The section on mortar ammunition pointed out a troublesome situation but did not indicate an overall solution to it.

(U) For the past several years turbulence in the Army's weapon system planning has caused substantial changes in ammunition requirements. These changes have impacted on the ability to satisfy the Marine Corps, Navy, and Air Force requirements. The Army's indecision on both the 60mm LWCMS (Light Weight Company Mortar System) and the replacement of the 4.2 inch mortar system with the 120mm mortar system and the turbulence in the Improved 81mm Mortar System are all responsible for uncertain customer plans. Since not all the DOD Services are planning for comparable new systems, the production base changeover to meet the Army's [sic] needs is causing problems in providing support for older systems. In some cases, such as the older 60mm system, the Army's previous agreements to supply from inventory with payback cannot be met because of increased requirements. In most instances, the Army has a less than adequate stockpile of older stocks to support either recurring DOD or potential FMS needs.

(U) In its discussion of main gun tank ammunition the ICAPP concluded that there was a need for aggressive action to reduce the unit costs of both the 120mm main gun ammunition and the T900. In its line item analysis the ICAPP had recommended that PM Tank Main Armament Systems (TMAS):

--Provide cost analysis data for all items, (by component or assembly) that drive unit costs for both 120mm tank main gun ammunition and the T900,

--Identify initiatives being taken to reduce these costs, and

--Identify the cost benefit of a "systems contract" approach instead of a component breakout approach for these munitions.

These recommendations were accepted, with AMC being tasked to initiate the study.

(U) In its review of demolition material the ICAPP suggested that the creation of a second production source for some of the items could improve contractor response and lower unit costs. Specific line item recommendations were made that a number of items in this category be considered as candidates for "Government-Owned Government-Operated (GOGO) job shop production."

(U) In its review of miscellaneous ammunitions (non-toxic chemicals, smokepots, bulk explosives and propellants, fuzes and primers) the ICAPP stated that the general position of the Single Manager for Conventional Ammunition on fuzes was threefold:

1. discourage fuze proliferation (resist impulse to create a new fuze for every new round or application)

2. promote multi-purpose/multi-option fuzes, and

3. promote commonality of fuzes across the Services

(U) The financial data in the ICAPP was also of interest. The funding required by the DOD ammunition procurement program for FY85 is shown below. Funding required by DOD ammunition procurement program for FY85 is shown in the table on the following page.

(U) This financial information was in fact available for all eight fiscal years covered by the ICAPP, but as the ICAPP pointedly noted in an interesting chart, the figures for the outyears were always inflated over what was actually available for use. Consistently, the further the projected year was from the actual date of the ICAPP, the more money it was projected to have, with each following ICAPP reducing the projected budget as the year came closer. Thus the FY85 DOD ammunition program was projected in the June 1982 ICAPP to be almost 6 billion dollars, but each later ICAPP reduced that figure until the October1985 ICAPP showed it to be under four billion dollars. Similar trends existed for FY86 though FY88.[119]

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[119] For a further analysis of this "bow wave" effect, see below.

Ammunition Procurement Program Instability (U)

(U) On 19 July 1984 the Joint Conventional Ammunition Program Coordinating Group (JCAP/CG) decided that a study should be conducted on instability in the ammunition procurement program. This was in response to a general perception by ammunition managers that a cause of inefficiencies in the program was "instability in the planning, programming, budgeting, and execution system (PPBES) for ammunition procurements. Frequent program changes during the procurement process may be contributing to inefficiencies, which in turn lead to reductions in ammunition dollars and quantities." The task of preparing the study was given to the JCAP Executive Committee, which in turn invited the Office of the Executive Director for Conventional Ammunition to direct the study under the supervision of the JCAP Executive Committee.[120]

(U) The study concluded that there was a significant amount of instability in the program and that it reduced the funds available for the purchase of ammunition, in good part because unstable programs were likely to be less successful than stable programs in the competition for funds. Some of the instability resulted from changes in operational requirements but much of the problem was internal to the ammunition procurement system. Significantly, the study argued that turbulence due to changes made at Service headquarters and by Congress should be considered as internal turbulence, "things we do to ourselves," because they were usually made in response to weaknesses or errors in the ammunition procurement system.

(U) The study singled out three causes of turbulence for special mention--the bow wave effect, pricing, and requirements instability. The bow wave effect, pushing purchases into the outyears in the POM cycle, was a significant cause of instability. To some extent this was inherent in the programming cycle, but the bow wave in the DOD ammunition procurement program was double that of the overall DOD budget. Moreover, the ammunition bow wave was significantly greater for the Army than the other Services, and the Army's bow wave was the principal influence on the DOD ammunition procurement bow wave.

(U) Inaccurate pricing estimates, usually overestimates, was another significant cause of instability. These overestimates were greater the further the projected purchase was from the present, but

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[120] Unless otherwise cited, information on this study comes from the Office of the Executive Director for Conventional Ammunition, Report on the Study of Ammunition Procurement Program Instability, 31 May 1985.

FY85 DOD Aggregate Dollars (in Millions) by Ammunition Category

Ammunition Category	Army	Marine Corps	Navy	Air Force	DOD Total
Small Arms thru 20mm	121.482	23.380	81.087	17.719	243.668
25mm/30mm/40mm/64mm	162.144	37.432	25.116	266.477	491.169
Mortar	99.204	15.565	00.000	00.000	114.769
Artillery and Navy Gun	1,008.768	225.270	65.647	00.000	1,299.68
Tank (Main Gun)	391.815	16.820	00.000	00.000	408.635
Bombs	00.000	00.000	138.666	116.415	255.081
Grenades	25.929	2.574	.685	4.918	34.106
Rockets	114.281	82.043	32.006	12.976	241.306
Mines	26.982	2.079	14.990	22.598	66.649
Demolition Material	22.756	12.921	12.815	1.860	50.352
Miscellaneous (Bulk Chemicals, Smoke Pots, Fuzes, etc.)	100.487	27.110	15.325	.237	143.159
Total	2,073.848	445.194	386.337	443.200	3,348.57

Source: Integrated Conventional Ammunition Procurement Plan, FY 84-91, Budget Year-87, Part II, pages 1-12, 2-7, 3-6, 4-10, 5-4, 6-7, 7-3, 8-6, 9-4, 10-10, 11-12, and 12-10.

even in the execution year the estimated prices were significantly greater than the actual contract prices. Besides resulting in consistently inaccurate estimates of how much money would be needed to purchase a specific amount of ammunition, this also resulted in overfunding of the Consolidated Ammunition Working Capital Fund (CAWCF) and thereby caused the problems involved in the return of obligation authority to the Services (see below in the section on the CAWCF). Another manifestation of instability in the program was the constant alteration of price estimates, with an average of four standard price lists being published during a PPBES cycle.

(U) Another cause of instability were changes in requirements. With the exception of the Army, however, high dollar items exhibited more stable requirements than did other items. As operational requirements were considered a Service rather than an SMCA matter, the report had relatively little information on or comments about changes in requirements, but changes in operational requirements were considered the only significant external cause for program instability

(U) Two other linked causes of instability in the past were the delayed receipt by the SMCA of program funds and the poor obligation rate of the SMCA. The study noted the improvement in these areas in FY85, but warned that "it is important that these improvements be sustained." (For more on these issues, see the next section on the CAWCF.

(U) Finally, the study noted that as a result of the cyclic nature of the PPBES process, these sources of instability had a feedback effect upon one other both within a PPBES cycle and on succeeding cycles. Thus program instability "is not only self-perpetuating but proliferative as well." Moreover, the interconnected nature of the system made it impossible to pick any one cause as the primary cause of instability. It was possible, however, to find a variety of specific improvements in various parts of the cycle that would eliminate, or at least minimize, instability in that part of the PPBES cycle.

(U) The study made a number of recommendations, some of them requiring action by OSD, to reduce instability in the ammunition procurement program. In the area of production base support, the study recommended that the SMCA have a greater say in determining the acquisition strategy for items which would be transferred to its control and that major configuration elements be settled earlier in the development process, both of which suggestions would improve planning for the production base. The study also recommended that

the production base support budget compete at the DOD level against the resources of all the Services in order to commit them to the stability of production base requirements.

(U) In the area of budget guidance from OSD and the Services' Secretariates, the study recommended provisions to preclude unrealistic bow waves and to stabilize operational requirements and minimize program changes.

(U) In the area of pricing, the study recommended that SMCA develop a procedure to better estimate both near term and out year prices. The study also urged that only one annual price list be promulgated by the CAWCF except under exceptional circumstances.

(U) In the area of execution, the study recommended that low risk ammunition procurements be funded for the full year instead of in increments in the event of Continuing Resolution Authority situations and that funding policies be revised so that OSD rather than the Services would give to SMCA the program and funding authority for low risk ammunition procurements, while still maintaining the identity and integrity of the individual Service appropriations. It also recommended that OSD release funds within 10 calendar days of an appropriation act or Continuing Resolution Authority. The study further recommended that the SMCA provide a weekly report with the following information: estimated current year procurement programs in total dollars, by Military Service; total current year program dollars accepted into the CAWCF, by Military Service; total current year program dollars that the Military Services have stated that they cannot provide to the SMCA within the 60-day limit, by Military Service; and current net obligations by the CAWCF compared to both annual and monthly obligation goals.

(U) In addition, the study recommended the timely execution of cost variance analysis and the prompt return to the Services of any excess funds identified by that analysis as well as having the SMCA report, no later than 31 December of each year, the status and planned disposition of all expiring year funds.

Consolidated Ammunition Working Capital Fund (CAWCF) (U)

(U) Criticism of the CAWCF had resulted in FY84 in a number of significant management actions to improve the operations of the CAWCF.[121] As a result of the success of those actions, a further ambitious obligation plan was developed for FY85 in order to continue the improved performance momentum. Included as part of the plan was the intensified use of short-of-award procedures, the establishment

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[121] For more details on the FY84 actions, see FY84 AHR.

and tracking of challenging obligation goals, expeditious funding authority transfers from the Office of the Secretary of Defense to the military Services and from the Services to the SMCA, and the movement of the heavy procurement workload from the third quarter to the second quarter of the fiscal year.

(U) This plan proved highly effective and resulted in an obligation rate of almost 85 percent, the highest ever attributable to this was the early receipt by the CAWCF of the Services obligation authority. In FY85 the CAWCF had received about 55 percent of the total DOD program by the end of the first month of the fiscal year, a remarkable achievement when compared with the previous year in which it had taken the fourth month of the fiscal year to reach that amount. "As a result, the entire fiscal year 1985 planning cycle was moved forward in the year, thereby permitting obligations to occur much earlier." See table on the following page.

(U) Based on the assumption that the FY85 trend toward early release of program funds would be continued in FY86, the SMCA set a goal to have the CAWCF obligate 75 percent of its procurement program within the first 6 months of the fiscal year and achieve an obligation rate of 87 percent.

(U) One problem that had existed in previous years was that the CAWCF had returned funds to the Services late in the fiscal year when actual contract costs proved to be less than the projected cost. The problem that arose from this was that the money returned to the Services had to be obligated by them before the end of the fiscal year if they were to be retained for use by DOD. Returning them to the Services late in the fiscal year thus made it difficult for the Services to effectively use this money. As a result a procedure was established by which these funds would be returned to the Services no later that the end of April of each year. That date "was selected because it provides the Services sufficient time to reobligate those funds before they expire and without creating program turbulence due to hastily conceived procurement adjustments. During FY85 the following funds were returned to the Services, with the FY83 funds, which would expire at the end of FY85, being returned in accord with the new procedure.

FY85 MILSVC Program (in millions of dollars) Transferred to SMCA

Service	1st quarter goal/actual	2nd quarter goal/actual	3rd quarter goal/actual	4th quarter goal/actual
Army	1403/1820	1870/1861	2221/2193	2338/2496
Navy	242/334	322/370	383/378	403/373
Air Force	313/473	417/463	496/511	521/548
Marine Corps	271/431	361/433	429/431	451/434
Total	2228/3058	2970/3126	3527/3512	3713/3851

Source: Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 1985, p 4.

Source Year Excess Funds Returned to the Services
(in Millions of Dollars)

Service	FY83	FY84	FY85	TOTAL
Army	33.7	27.1	90.4	151.2
Navy	6.8	12.2	24.1	43.1
Air Force	5.0	11.2	9.5	25.7
Marine Corps	13.8	24.9	15.9	54.6

Source: Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 1985, p 8.

(U) In response to criticism of the operation of the CAWCF in FY82 and 83, a major study of CAWCF operations with the goal of "increasing the efficiency and effectiveness of the CAWCF as a financial management mechanism" was started in FY85. The study was to consist of a "vertical analysis of CAWCF operations extending from the issuance of OSD guidance, through Department of Army/major subordinate command support and other Military Service interfaces, to program execution." In order to ensure a fresh independent outlook on CAWCF operations, the study was contracted out. It was completed in November 1985, and the report, together with its implementation will be discussed in the AHR for FY86.

(U) The SMCA Annual Report was used to make two major recommendations, both concerning the financial operations and management of the program, and both of which were also discussed, at least in part, in the previously cited instability study. The first issue, which had also been raised in FY84, concerned the funding for the nonreimbursable portions of the program, Production Base Support and Operations and Maintenance (O&M) funding for the SMCA. Both were currently funded by the Army out of its Operations and Maintenance, Army funds, despite a 1979 GAO warning that the program would suffer if the Army was forced to absorb all the costs without additional funding from DOD. The annual report stated that, based on annual procurement program funding, the Army program was approximately 50 percent of the SMCA program, and noted the GAO study's argument that the additional cost to the Army of acting as Single Manager for Conventional Ammunition should be provided for by DOD. The report warned that the situation could become serious "in the austere budgets that lie ahead" and repeated its position of the past two

SMCA PARR Requirements/Programs/Shortfalls
(in millions of dollars)

Fund	FY87	FY88	FY89	FY90	FY91
PAA					
Requirement	396.5	635.2	464.8	710.1	769.9
Programmed	240.1	201.3	187.1	213.2	311.7
Shortfall	156.4	433.9	277.7	496.9	458.2
OMA					
Requirement	488.8	484.9	502.9	563.9	576.7
Programmed	391.6	259.6	364.5	368.7	420.2
Shortfall	97.2	225.3	138.4	195.2	156.5

Source: Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 1985, p 32.

years that production base support and SMCA O&M costs should compete at DOD against the funds available for all the services. See table on the following page.

(U) The second recommendation involved the position of SMCA that the DOD Comptroller was too involved in day-to-day management of the CAWCF rather that providing general guidance. The annual report recounted in some detail an incident in which AMCCOM revised a "negative surcharge" (discount) from 3% to 7.5% in the annual June 1985 standard price list, only to have DOD in August direct that the FY86 and 87 ammunition procurement plans be recalculated in accord with the previous discount, leaving the Services little time to make the adjustments prior to submitting the FY87 budgets to DOD.

(U) Although it is concluded that OSD acted within its authority, it is considered that such manipulation of the CAWCF was both typical and damaging. The CAWCF has been operational for four full years. Apart from the policy guidelines in the CAWCF charter, not one scintilla of formally published pricing guidance has been issued. It would seem that OSD (Comptroller) would serve the Department of Defense better by diverting energies to the development of such guidance, rather than by directing massive repricing efforts at precisely the wrong moments in the budget cycle. It is believed that the benefits of program stability, which include obvious economic pay-offs from the chance to make rational decisions in planning and executing ammunition procurement, would far exceed the relatively small net amounts saved by OSD in Program Budget Decision marks.

Logistics (U)

(U) The SMCA logistical management consisted of functional support and operating the logistics support base. This included the receipt, issue, warehousing, and inspection of munitions at storage locations; performance of minor maintenance, and demilitarization and disposal. All of these activities were funded by the SMCA, and thus were one of the areas for which the SMCA wished to have the funding system changed so that these functions would compete for funds at the DOD level rather than at DA. Other SMCA-provided logistics functions were financed by the Services. The Annual Report noted that although the logistics program was overall being conducted in an efficient and effective manner, "O&M funding constraints, especially fiscal year 1988 through the end of the current POM period, will challenge the ability of the SMCA to provide the degree of logistical support needed to maintain a high readiness posture by the Military Services."

ICAMP (U)

(U) The Integrated Conventional Ammunition Maintenance Plan (ICAMP) was a document, somewhat similar in nature to the ICAPP, which integrated the wholesale maintenance planning of the four Services. The FY86-FY92 ICAMP was published on 30 September 1985 and covered both major maintenance (modification, conversions, component replacements) and minor maintenance (external, packaging, and preservation).

(U) Its line item analysis of the Services major maintenance plans resulted in 52 recommendations.

Summary of ICAMP Major Maintenance Recommendations

Service	Recommendations	Accepted	Declined	Pending
Army	8	8	0	0
Navy	42	39	1	2
Air Force	9	0		0
Marine Corps	2	2	0	0
Total	52	49	1	2

Source: Integrated Conventional Ammunition Maintenance Plan, FY86-FY92, Part I, 30 Sep 1985, p. I-II.

(U) Recommendations included proposals to consolidate or reschedule programs, revise program quantities, to increase certain programs to offset shortfalls in other programs, and to delete programs. The report also repeated 10 general recommendations made in the previous ICAMP, gave the current response or status of the recommendation, and added an eleventh recommendation

General Recommendations of the ICAMP (U)

RECOMMENDATION: Obtain contract authority for the CAWCF. RESPONSE: Has gained some significant support but is still opposed by the OSD Comptroller and the House Appropriations Committee staffer.

RECOMMENDATION: AMCCOM develop procedures to consolidate the Services component and packaging requirements for the entire ICAMP period. RESPONSE: Being done for the first two years of the ICAMP study period with a projection for the following five year period.

RECOMMENDATION: Exclude ammunition from the Resource Conservation and Recoverability Act. RESPONSE: Army negotiations with OSD and the EPA were continuing.

RECOMMENDATION: AMCCOM program for an additional 5,000 short tons of minor maintenance in FY86 in order to achieve a management level in FY87. RESPONSE: The current plan would reach the management level, 18,000 tons, in FY87, one year earlier than previous plans

RECOMMENDATION: The CAWCF stock commonly used high turn-turnover repair components and packaging material. RESPONSE: The recommendation is pending, and a procurement policy to accomplish it has been approved by the Services.

RECOMMENDATION. The Army conduct a survey of the adequacy and useful life of its current ammunition maintenance facilities. RESPONSE. See item 7.

RECOMMENDATION: The Army develop a model maintenance facility. RESPONSE: The U.S. Army Defense Ammunition Center and School was to conduct a survey of current facilities and develop a model maintenance facility, with the study planned for FY88.

RECOMMENDATION: Improve mobilization/post-mobilization maintenance capabilities. RESPONSE: Ways of doing this were to be explored.

RECOMMENDATION: AMCCOM study the need for facility and equipment investments and the impact if they were not made. RESPONSE: Coordination with developers and engineers would continue to ensure proper facility and maintenance support.

RECOMMENDATION: AMCCOM to assure that maintainability standards be provided for each item as it transitions from R&D to full scale production. RESPONSE: Coordination with developers to assure that it was continuing.

RECOMMENDATION: Support of the DSACS maintenance module. RESPONSE: Systems submitted for DSACS implementation included a computerized program applicable to Army Depot Maintenance Work Requirements (DMWR), an ammunition peculiar equipment (APE) asset listing identifying APE location and condition codes, and Maintenance

(U) The Annual Report of the SMCA noted that the status of major maintenance, as shown in the ICAMP, was good. The backlog of major maintenance had been reduced to a manageable level, one year's generation or approximately 16,000 short tons, and the slippage of minor maintenance programs was rarely due to faulty planning. When minor maintenance programs did slip, it was usually because of an unforeseen problem after work began, such as a change in the scope of work, or priority, or an occasional delay in component delivery. As further evidence of the status of major maintenance, the report pointed to a DOD IG inspection. The inspection was a preliminary survey of major maintenance for ammunition being conducted prior to a formal audit. The formal audit, however, was cancelled by the DOD IG because it found that "the Single Manager for Conventional Ammunition was effectively coordinating and accomplishing major maintenance."

Supply (U)

(U) The supply indicators for FY85 were generally positive. The Materiel Denial Rate continued to decline, although it had not yet fallen to its goal of 1%, and significant improvements were made in the areas of Materiel Denials Inventory Accuracy Rate and Location Record Accuracy. The percentages for Receipts Posted/Stowed On Time and Location Audit Reconciliation rates declined slightly from FY84, but the annual report stated that "a continuing positive trend was still maintained." One problem area was inaccurate data on the time it took to handle various priorities of requests, with the Joint Ordnance Commanders Group, Supply Group, attempting to come up with an improved system during FY86.

Physical Inventory Study (U)

(U) In May 1985 the Deputy Assistant Secretary of Defense (Logistics and Materiel Management) asked the Logistics Systems Analysis Office (LSAO) to conduct a study "to analyze and evaluate physical inventory policies, procedures, and practices for conventional ammunition."[122] The resulting study was published in September 1985 and found that even though the dollar value of ammunition inventory adjustments appeared large, actual losses were

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[122] Unless otherwise cited, the information of the LSAO study was taken from LSAO, Physical Inventory of Ammunition, Sep 85.

minimal. Nevertheless, inventory record errors could result in erroneous supply actions and unnecessary effort. While ammunition security problems existed, the majority occurred after issue; consequently, physical inventory of ammunition is not required.

The study did, however, identify four problem areas in which improvements were required. These areas included inconsistencies between inventory management and security directives, weaknesses in the way the Army conducted physical inventories of ammunition, the need for a standard DOD LOGMARS (Logistic Application of Automated Marking and Reading Symbols) policy, and high personnel turnover among ammunition inventory counters.

(U) In the case of directives the study found that guidance for ammunition inventory policy was split between inventory and security regulations and that "often policies are not perpetuated from one regulation to another, terms are not common between regulations, and inconsistencies and voids exist." Examples included the fact that although a security directive required that certain missiles and rockets be inventoried twice a year, the inventory regulations did not contain that requirement; the use of the term "sensitive item" in a security directive while documents that it referenced failed to use that term, except in an appendix, and never fully defined it; while as an example of voids, the study noted that specific guidance was given for Category I missiles and rockets but not for Category I explosive warheads. In answer to these problems the study recommended that OSD ensure that inventory and security regulations be compatible with one another, that voids be eliminated, and that terminology is clear. The study also recommended that MILSTRAP (Military Standard Transportation Reporting and Accounting Procedures) be changed so as to consolidate into one section all the guidance on physical inventory procedures for ammunition.

(U) The study took issue with the way the Army conducted its physical inventory of ammunition, although it noted that the Army procedures were in accord with current DOD guidance. The Army, unlike the other Services, used a nonblind inventory in which the inventory counter knew what the inventory should be. The Army supported this policy as more efficient since "by providing the counter with the custodial record balance for the first count, discrepancies between custodial records and the magazine data cards could be immediately identified and a physical count initiated," without the need for a return visit to the storage site that would be required if only the inventory office knew the correct count and could detect the discrepancy. The study, however, cited Army Audit Agency criticism of this practice and noted that "when a physical count is performed, prior knowledge of custodial record balance may influence the count."

(U) The report also criticized the Army's use of magazine cards to furnish the data for the physical inventory. The report noted that other Services also performed inventories by using aggregate quantity markings on unopened containers rather than an actual physical count, but argued that the Army's use of magazine card balances had a greater risk of being in error since magazine cards recorded the amount of similar items stored together but not banded together and, "a box whose removal is not recorded on a magazine card is less likely to be detected than a container which has been cut opened or a pallet whose banding has been cut." The study also noted that although elimination of the use of the magazine card would result in the need for additional resources for inventory counts, the advent of LOGMARS markings on containers would make it possible to perform blind inventories, counting individual containers with less resources than were currently used for nonblind inventories using magazine cards. The study noted that the Navy was using and the Air Force planned to use LOGMARS markings on containers for inventories, and suggested that the Army do the same.

(U) This was related to the recommended changes, DOD policy on LOGMARS. LOGMARS was the use of machine readable bar codes on equipment or supplies. The study noted that the Services differed in their use of LOGMARS. The Navy, for example, could use LOGMARS quantity markings on containers to determine inventory while the Army was not planning to use LOGMARS for physical inventory purposes. The Navy was scanning LOGMARS bar codes with a laser gun scanner while the Army was using a less effective non-laser wand, and was apparently unaware that the Navy had shown the laser gun scanner to be safe to use with ammunition and was in fact using it in ammunition magazines. Finally, despite the fact that the Services claimed to have adopted common shipping labels, The Army and Navy in fact required different LOGMARS shipping labels. Therefore, the study recommended that a common DOD policy be adopted on the use of LOGMARS for physical ammunition inventory, and that "the Navy approach should be the baseline for implementation by all DOD Components."

(U) The study found a significant personnel problem among ammunition counters, the people who performed the actual physical inventory. Turnover among these personnel was as high as 50 percent with an average tenure of six months, leading to such problems as lack of expertise and more frequent errors, loss of production due to heavy training requirements, the diversion of management attention to training and closely monitoring the operations of inexperienced personnel, loss of personnel resources during recruiting, and poor morale. The turnover problem was caused by the low grades, especially in activities where positions were reclassified from wage board to GS positions--with the ammunition counters frequently making the lowest salary in the

activity. In contrast, at one contractor-owned facility the ammunition counters, with similar responsibilities to those in the Civil Service, had salaries which were double those found at some government facilities (there were also wide variations in pay among government-owned facilities) and had an average tenure as ammunition counters of over 20 years. The report noted that various government facilities have taken a number of measures to try to correct this problem, including assigning additional responsibilities to ammunition counters in an effort to upgrade their classification, using military personnel to perform that function, and having higher salaried contractor personnel perform that function. In its recommendations the study suggested that the Services consider all three of these options as ways to correct this problem.

Demilitarization (U)

(U) The SMCA Annual Report noted that considerable progress had been made in reducing the demilitarization stockpile since the 1982 Blue Ribbon Report on Demilitarization. The stockpile had been reduced from the then existing 220,000 short tons to approximately 173,000 short tons by the end of FY84. The downward trend continued in FY85 with the reduction of the stockpile to 155,000 short tons; however, that was considerably in excess of the FY85 goal of no more than 87,000 short tons. Even worse was the fact that at currently programmed funding levels the stockpile was projected to grow rather than decline in the next several fiscal years, with an anticipated stockpile of 173,000 short tons in FY86 versus the blue ribbon goal for that year of 78,000 short tons.

(U) A legal problem in the demilitarization program that developed in late FY84 continued through FY85 and into FY86. The problem originated when the State of Kentucky cited the Lexington Bluegrass Depot Activity (now known as the Lexington Bluegrass Army Depot) and stated that its demilitarization of certain chemical munitions was in violation of the Resource Conservation and Recovery Act (RCRA). This developed into a dispute between AMC and the Protection Agency over the status of ammunition slated for demilitarization. DOD argued that such ammunition should not be considered hazardous wastes and subject to RCRA until the demilitarization process actually began while the EPA argued that such ammunition was subject to the RCRA when the decision to demilitarize it was made, and that all subsequent storage and transportation was subject to the requirements of the RCRA. In addition, the EPA "did not concur in the concept that DOD and Military Service regulations are totally adequate to protect human health and the environment, and cited several deficiencies to support its case." This issue continued into FY86 and had a potential high dollar cost attached to it since the victory of the EPA position on when ammunition was subject to the RCRA would

result in a situation in which "each demilitarization operation will have to be handled on a site-by-site, case-by-case basis with the involved State being preeminent."

(U) A dispute also existed concerning the Western Area Demilitarization Facility (WADF). Operation of this facility had been turned over to the Army in FY84 but as its operation as an entire facility was considered to be uneconomical, only those portions of it that supported the Hawthorne Army Ammunition Plant (HWAAP) mission were kept operational.[123] This included such areas as the administrative center, chemical laboratory, storage area, and small item deactivation furnace. However, the fact that WADF was now operational, even if the Army was in fact not using most of it, led to problems with the state of Nevada. Nevada had been granting HWAAP an annual open burning/open detonation permit pending the completion of WADF. In March 1985 the latest permit expired and was not renewed. This also impacted the "New Bomb" facility which was located on National Forest property leased from the Department of Interior. It was badly contaminated with unexploded ordnance, and the expiration of the open burning/open detonation permit curtailed its clean-up, although some contract clean-up operations continued. The Army did not directly apply to Nevada for a new permit but instead conducted tests at Dugway Proving Grounds to determine the emissions that resulted from open burning/open detonations. These tests were to be completed in the third quarter of FY86, and "if appropriate, the test results will be used to support a new permit request."

Ammunition Specialist Career Program (ASCP) (U)

(U) In late FY83 an Ammunition Specialist Career program was established in response to a provision in DOD Directive 5160.65 (the document which gave the Army the SMCA function) which required the SMCA to identify civilian and military positions for career purposes, to rebuild the declining civilian expertise in ammunition logistics. Its objectives included meeting current and future ammunition personnel needs with highly qualified personnel by attracting and maintaining careerists in the field, providing training and assignment opportunities to personnel in that field, and providing central management of a DA personnel inventory and referral system for that field.

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123 For some background on this issue, see the AMC AHR for FY84. Information on demilitarization in this history is taken from the Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 85.

(U) As part of this program GS-5 interns in the ASCP took a 103-week training program consisting of 58 weeks of classroom instruction at the US Army Defense Ammunition Center and School (USADACS) followed by 45 weeks of on-the-job training conducted at various AMC installations. In the course of this program, the interns were promoted to GS-7 after 1 year (while still taking formal classroom training) and were promoted to GS-9 upon completion of the on-the-job training portion of the program. The first class in the program started its training in August 1983 and completed it in September 1985.

(U) By the end of FY85, the necessary administrative steps for the operation of the career field program had been taken, including the assignment of a career program number (33), the naming of the CG, AMC as the ASCP functional chief, the provision of registration information to DA major subordinate commands, the start of the identification of all ammunition career field positions worldwide, the establishment of GS-11 through GS/GM-15 as the levels for mandatory DA-wide referral levels for the ASCP, and the establishment of USADACS as the DA Central Referral Office for the program. It started operations as the Central Referral Office on 17 June 1985 and ASCP positions in the targeted grades were beginning to be filled through referral lists issued by that office. In June 1985 a DA screening panel for the program, the first of what was to be an annual requirement, accepted 479 applicants as qualified registrants in the program, and 288 of them were rated by the panel for promotion and placement.

(U) Although the ASCP was an Army program, the ultimate goal was for a DOD-wide program covering all the Military Services. Currently the Navy and Air Force were evaluating the Army program to decide if they should join it.

LOGMARS (U)

(U) In FY84, at the request of the Military Services, the SMCA field operating elements agreed to provide LOGMARS bar coding on ammunition shipments starting in FY85.[124] Delivery of bar code readers and printers to the 26 SMCA ammunition facilities was completed by mid-March 1985, and by 11 April 1985 all facilities were bar coding ammunition as they produced or renovated it. Wholesale ammunitions stocks in storage were being bar coded when shipped. This permitted the Services to use the information provided by the SMCA bar codes in

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[124] For more background on this subject, see FY84 AHR.

their own automated systems. The SMCA Annual Report noted that "of special mention is the fact that this notable success was achieved in less than ten months."[125]

Defense Standard Ammunition Computer System (DSACS) (U)

(U) DSACS was being developed "to support the SMCA and the Military Services in the acquisition, logistics, financial, and management of SMCA-assigned conventional ammunition items" by providing "a dedicated automated information system that would interface with the individual Military Service retail and wholesale ammunition management systems through telecommunications media," as well as provide access to a variety of ammunition data bases, both those common to SMCA and the Military Services and those which apply only to SMCA or a specific Military Service.[126]

(U) DSACS had its origins in the original 1981 DOD charter for the SMCA, which had included a provision for the SMCA "to develop, design and centrally maintain a standard DOD-wide automated data system covering the logistics functions in this (SMCA) assignment." Actual development of the system began in 1982 with a Joint Service effort of concept formulation which resulted in a Mission Element Need Statement (MENS) that was approved on 12 May 1983 by the ASA (RDA). In October 1983 ASA (RDA) approved the Project Manager Charter for the program, and on 7 May 1984 the CG, AMCCOM appointed Mr. Greg Legare as program manager.[127]

(U) FY85 saw a variety of steps taken toward the implementation of Quarterly Interservice In Process Reviews; the DSACS acquisition plan as well as a request for a waiver to permit the leasing of hardware was approved, the DSACS decision paper for Milestone I (Concept and Development phase) was approved; and procurement authority for the DSACS equipment was delegated to the DSACS

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125 Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 1985. For a further discussion of LOGMRS and ammunition see the previous discussion of the LSAO Physical Inventory of Ammunition Study.

126 Unless otherwise cited, the information on the DSACS comes from the Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 85.

127 Memorandum for the Assistant Secretary of the Army (Research, Development and Acquisition), subj: Defense Standard Ammunition Computer System (DSACS) System Decision Paper I (SDPI)--Action Memorandum, 30 Jan 85.

contracting office, an accelerated plan to field the unclassified portion of the DSACS in FY86 instead of FY87 was approved; 248 of the 1,650 milestones for DSACS were completed which kept the accelerated program on schedule; reprogramming took care of FY85 unfunded requirements; a Request for Production (RFP) for software services was released with a closure date of 15 October 1985; an RFP for hardware leasing was released with a closure date of 24 October 1985, and the Defense Communications Agency started work on the problems involved in classified data transmission.

(U) The program did, however, face some significant personnel and funding problems. A $4.5 million shortfall in programmed FY86 funding threatened the accelerated program for fielding the DSACS in FY86. Only 20 of the 46 personnel spaces needed to develop and field the unclassified portion of the DSACS were filled due to funding constraints. Moreover, those positions were not authorized as permanent positions but rather as temporary positions which were to expire at the end of FY85. With the expiration of those positions, the twenty staffers were put into overhire status, "which appears to be a tenuous situation in view of budgeting constraints." This could put the program in "serious jeopardy."

Production Base (U)

(U) In FY85 the Modernization and Expansion program budget for the improvement of the production base totalled $183.2 million for 37 projects. Of this, $114.4 million was for initial production facilities for newly transitioned and first time items and/or the expansion of existing capabilities, while $68.8 million was for the modernization of existing capabilities. No funds were allocated for the support of existing facilities, a category that usually included such items as utilities, environment, and safety requirements.[128]

(U) Certain additional programs not included in the Modernization and Expansion program also provided funds for the production base. In FY85 a total of 14 plants received $37.77 million under the Production Support and Equipment Program used to maintain existing government-owned production facilities with an active production requirement. Under the Layaway of Industrial Facilities program for

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[128] Unless otherwise cited, information on the production base comes from Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 85. Some of the major Production Base projects are listed on page 23 of that report.

production facilities which were not needed for current production but were to be maintained for mobilization production requirements, 42 projects were funded for FY85 at $20.0 million.

(U) In FY85 AMCCOM was in the process of developing the Plant Job Scheduling Model (PJSM) to be used as a management tool to "estimate the yearly production quantities and mix of ammunition within the GOCO AAP (Army Ammunition Plant) complex necessary to maintain efficient production rates and stable, fully utilized personnel levels." It was to be used to develop guidance parameters for the FY88-92 POM and for the 1986 Army Materiel Program review.

McAlester A-Line (U)

(U) FY85 saw the resolution of a dispute between the Army and Navy that had begun the previous year, following the May 1984 announcement by the Deputy Secretary of Defense that the McAlester A-line would be converted to a PBX bomb loading production line. The Navy's draft Memorandum of Understanding (MOU) on that topic specified that the Army would cover all costs for the conversion that exceeded the $13.2 million already programmed for it by the Navy; however, the Army objected to funding a program which was of no benefit to it. Eventually, an agreement was reached in which the Army would decide at the 35 percent design stage what additional funding, if any, was required from the Navy, with the Army being responsible for any funding requirements over and above that which was determined at the 35 percent design stage. With this agreement in hand, an MOU on the topic was completed on 25 April 1985. The MOU provided that the A-line was to be transferred from the Navy to the Army as soon as was mutually convenient, that the Army use the $13.2 million transferred to it from the Navy for design and long lead production, that the Navy provide any additional funds for the conversion of the A-line that were determined to be required at the 35 percent design stage and that the Army be responsible for any additional funding requirements.

(U) In accord with the MOU, the A-line was transferred to the Army on 2 May 1985. The 35 percent design stage was reached on 1 July 1985, and it was then determined that no additional funds were required from the Navy. Final design was initiated in August 1985. Future projected milestones for the program included the award of a contract by the Corps of Engineers for work on the facility by 13 march 1986 and award of a contract by AMCCOM for long lead time equipment by 28 November 1985. It was anticipated that the installation of new equipment and equipment rehabilitation would be a complished by July 1987 and that it would be debugged and that proveout would be completed by January 1988.

Green Salt (U)

(U) The FY84 AHR discussed efforts taken during that year to stimulate commercial interest in producing Green Salt (UF4), an essential ingredient in depleted uranium penetrators, from readily available uranium hexafloride (UF6).[129] The Department of Energy had closed down its conversion plant at Paducah, Kentucky in 1978, and it was necessary that a commercial source of Green Salt be developed before the stock pile of Green Salt was depleted. Therefore, the Army had declared that Green Salt would no longer be provided as government furnished materiel starting in FY86. FY85 saw encouraging developments from this policy when Nuclear Metals Inc. (NMI) started to develope a commercial conversion plant at Barnwell, North Carolina in October 1984 and had a successful proveout of it in August 1985. The current output was approximately 6 million pounds per year, and it supplied 80 percent of NMI's Green Salt requirements. NMI was prepared to expand the capacity of the plant on an incremental basis up to a total capacity of 50 million pounds per year and was looking at opportunities for additional business supplying either Green Salt, depleted uranium metal, or depleted uranium penetrators. In addition, Kerr-McGee was developing under contract to Aerojet a Green Salt facility in Oklahoma which was expected to be in production toward the end of FY86.

(U) Discussed in the FY84 AHR was the plan to modernize and improve the production base for HMX and RDX explosives by improvements at the Holston Army Ammunition Plant (HAAP), conversion of one RDX line at HAAP to a BACHMANN HMX line, and construction of a new MUSALL process HMX facility and several new RDX BACHMANN process facilities throughout the United States.[130] In the FY84 DOD Appropriation Act, Congress had inserted language which prevented the release of funds for new HMX/RDX facilities until the Army gave Congress a master plan. That plan was written in May 1984 and after its receipt, and the answers to some additional questions, Congress released some of the funds.

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[129] For events in FY84, see FY84 AHR. The rest of this section is taken from Executive Director for Conventional Ammunition, Annual Report: Progress and Status o the Single Manager for Conventional Ammunition, Nov 85.

[130] For the background on HMX, RDX, and the new MUSALL process for the production of HMX, see FY84 AHR. For the events in FY85, see the Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 85.

(U) By the end of FY85, the status of the program was as follows. For creation of a Lawrence Livermore/Morton Thiokol HMX MUSALL process demons ration model at Longhorn AAP, three million dollars in FY83 funds had been released. This project was on schedule, and production from this demonstration model was projected to start in the first quarter of FY86. For the final design of a scale pilot HMX plant at Longhorn AAP, $4 million of FY85 money was released. It was anticipated that the funds would be obligated in the first quarter of FY86 and that "a full production facility will be site located upon completion of the design effort to determine production plant configuration." For the modernization of facilities at Holston Army Ammunition Plant, $24 million in FY85 money was released and obligated. These funds would be used to increase the plant's productivity and to improve the mobilization capability for production of both RDX and HMX by the BACHMANN process.

(U) In addition, $19.5 million of FY84 funds and $32 million of FY85 funds for design and engineering work on the RDX mobilization base expansion effort were still on hold by congressional directive at the end of FY85. At issue was the optimum size of the new RDX facilities to be constructed at the Louisiana AAP, the Joliet AAP, the Alabama AAP, the Indiana AAP, and the Iowa AAP. Three separate studies of this issue had been made, and the resulting Army position was sent to Congress on 5 November 1985

Sustainability Study (U)

(U) On 24 January 1985 the Deputy Secretary of Defense ordered a joint OSD/DA analysis to determine how DOD could build indefinite sustainability under alternative scenarios, how the Services determined their mobilization requirements, and "the balance among all major components of the munitions production capability and reserve inventories." This analysis was due to have been completed by October 1985, but the due date slipped to late in the first quarter of FY86. "When complete, the study should provide an academic demonstration of a recommended method for making rational decisions to achieve ammunition sustainability."

SMCA Cost Avoidances (U)

(U) In FY84 a system known as The Optimum Cost Avoidance Methodology (TOCAM) was developed as a way to report SMCA cost avoidances. It "significantly improved the credibility of reported SMCA cost avoidances."[131] The TOCAM cost avoidance goal for FY85 was $222.7 million, but SMCA exceeded this goal with total cost avoidances of

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[131] For more on TOCAM, see FY84 AHR.

SMCA Cost Avoidance FY78-FY85
(in millions of dollars)

TOCAM Category	FY 78	FY 79	FY 80	FY 81	FY 82	FY 83	FY 84	FY 85	Total	% of total
Ammunition Inventory Mgt	39.8	72.5	3.5	1.3	75.8	28.5	2.3	280.8	504.5	33.6
Transportation & Traffic Mgt	11.5	7.5	12.8	20.3	31.8	39.1	34.2	48.8	206.0	13.7
Production Base Mgt	-	-	-	-	34.4	20.0	26.7	4.3	85.4	5.7
Value Engineering	37.6	33.7	26.9	97.3	48.6	62.5	48.8	127.9	483.3	32.1
Maintenance Mgt	-	-	-	-	1.3	1.1	.4	.2	3.0	.2
Procurement Mgt	-	-	-	-	3.6	72.4	22.9	14.6	113.5	7.6
Misc.							.6	1.6	2.2	.1
Production Mgt*	26.4	3.3	11.3	4.8	.9	1.0	57.3	-	105.0	7.0
Total	115.3	117.0	54.5	123.7	196.4	224.6	193.2	478.2	1502.9	100

*Production Mgt was incorporated into Production Base Management in the 3rd and 4th quarter of FY84.

Source: Executive Director for Conventional Ammunition, Annual Report: Progress and Status of the Single Manager for Conventional Ammunition, Nov 1985, p 31.

$478.2 million. A major contributor to that was $280.8 million savings in the area of ammunition inventory management, compared with FY84 savings in that category of only $2.3 million. Most of this was due to the substitution of excess Marine Corps 175mm high explosive rounds against the total Korean WRSA (War Reserve Supplies Allies) 8-inch howitzer requirement.

War Reserve Stocks for Korea (U)

(U) This program was designed to fill war reserve ammunition shortages for American forces in Korea and for support of the Korean Army. The FY84 program for $125 million was approved at the same time as the FY85 program of of $135 million. The Office of the Secretary of Defense raised legal questions about the FY84 program since the money for it was appropriated in an October 1984 Continuing Resolution after FY84 had ended. The office of the Assistant Secretary of Defense (International Security Affairs) resolved the legal problems and both the FY84 and the FY85 programs were shipped during FY85.[132]

TMDE Program (U)

(U) The management of the Army-wide Test, Measurement,and Diagnostic Equipment (TMDE) program was assigned to the Commanding General, AMC on 27 April 1982, by Secretary of the Army Charter. This charter designated the Commander, AMC, as the Department of the Army TMDE Executive Agent (DATEA), and designated the Deputy Commanding General for Materiel Readiness as the Executive Director for TMDE (EDT) to manage total Army TMDE acquisition (including research, development, production, and procurement), logistics and financial management.

(U) The AMC TMDE community was comprised of the Office for TMDE Management (AMC-TM) at Headquarters AMC and three field organizations: the Central TMDE Activity (USACTA), Lexington, Kentucky; the TMDE Support Group (USATSG), Huntsville, Alabama; and the Program Manager for Test, Measurement, and Diagnostics Equipment (PM,TMDE), Fort Monmouth, New Jersey, which reported to the commander CECOM.

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132 FY85 AHR submission from DCS for Supply, Maintenance and Transportation.

Organizational Data (U)

(U) The Deputy Executive Director of TMDE was Michael C. Sandusky, who on 26 August 1985 assumed the position Deputy Chief of Staff for Resource Management, was replaced as Acting Deputy Executive Director for TMDE by Robert K. DuBois.

(U) Although authorized manpower spaces remained stable in FY85 at 20 civilian spaces and 1 military space, the Headquarters restructuring resulted in a planned reduction of 3 spaces from the office-one to be lost in FY86, one in FY87, and the last in FY88.[133]

Management Chapter (U)

TMDE Management Information System (TEMIS) (U)

(U) Considerable progress was made in developing and establishing the TEMIS system. Milestone III-System Development was completed. Hardware and operational software for the system was acquired through government automatic data processing (ADP) excess sources in lieu of new equipment at a cost avoidance savings of $1.3 million, reducing the requirement for additional OPA funds to finance/software acquisition.[134] The initial sections of TEMIS dealing with the Preferred Items List (PIL), the Register, Acquisition Management and the TDEB Data Base (Equipment) were totally installed and made operational. Resultant efficiencies in operations were noted.

(U) Projected to be completed by FY88 were authorizations data, financial management, Test Equipment Modernization (TEMOD), End Item (Weapon Systems) information, purge/wash-out data, Test Program Set, property book, parameter search information and other management data.

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133 Unless otherwise cited, all sources for the TMDE portion of the history are taken from the Office of the Executive Director of TMDE AHR input, FY85. This AHR input also included information from USACTA; USATSG; and PM. TMDE. For the Headquarters restructuring see the Resources.

134 See the USACTAS section for further information on TEMIS and the computer acquisition of it.

Review of Equipment Specifications and Organizational Requirements for TMDE (U)

(U) Operation RESORT was initiated to provide a systemic mechanism to evaluate the currency of TMDE field requirements in Table of Organizations and Equipment (TOE)/Sets, Kits and Outfits (SKO) and provide overall quantitative/qualitative validation of user needs. It required a taskforce from HQ AMC, US Army Central TMDE Activity (USACTA) US Army TMDE Support Group (USATSG), PM-TMDE, Equipment Authorization Review Activity (EARA), TRADOC, and FORSCOM personnel that would identify and delete underutilized/obsolete TMDE user authorization documents.

(U) RESORT augmented PM-TMDE efforts in the Infantry Division by extending the review/purge process beyond Test Equipment Modernization (TEMOD) of all items of TMDE. It was to remove from the Army inventory all items having no field utility and was also to develop actual usage information on all other TMDE for consideration in future TEMOD efforts.

(U) The program was to be stated on a trial basis at Ft. Bragg to test feasibility, and then move through organizations with high payoff potential and document results in savings/cost avoidances by weight, cube, quantities, dollars and personnel.

Intermediate Forward Test Equipment (IFTE) (U)

(U) The Intermediate Forward Test Equipment (IFTE) program experienced severe funding problems in FY85 which once again threatened the existence of the program. After several deliberations in Congress, the 6.3 and 6.4 programs were fully funded, as reflected in the 26 September 1984 Congressional Record; however, Congress incorporated language in the bill that required, before any of the funds authorized for 6.3 and 6.4 programs were obligated, the Secretary of the Army to submit a reply to the committees on Armed Services of the Senate and House of Representatives, providing details on: Army doctrine for the maintenance of the equipment now being fielded, and the plan for addressing research and development requirements for testing equipment.

(U) In a report to Congress on R&D for testing equipment, the Army explained that at the intermediate support level there was a need for a modular and reconfigurable standardized test system "capable of accommodating the wide range of technology used in the design of weapon systems currently being fielded," that it could be reconfigured for use at different intermediate levels of support, in response to that need.

(U) In 1983, an advanced development contract was completed by five contractors to define a common (multi-commodity) tester for use at the intermediate maintenance level within the divisions and Corps. This tester is called the Intermediate Forward Test Equipment (IFTE) program. The IFTE consists of a mobile shelter mounted Base Shop Test Facility (BSTF) and a man portable Contact Test Set (CTS). A cost and operational effectiveness analysis (COEA) of IFTE was performed in 1984. A further detailed analysis was being conducted to determine the extent to which the divisional deployment of IFTE could be moved to EAC and depot levels in Europe It was considered, however, that the IFTE equipment would be the appropriate system whatever the level at which it is used. The principal consequence of the further analysis, potentially, was a reduction in the total quantity of IFTE equipments which should be procured. Additional analysis was performed to determine the feasibility of employment of IFTE at Echelons Above Corps locations within the intermediate maintenance level.

(U) Based on the congressional restrictions, the Under Secretary of the Army directed that the program be held in abeyance pending the results of an update to the IFTE Cost and Operational Effectiveness Analysis (COEA). The COEA was completed in October 1984 and initially presented on 7 November 1984. A follow-up briefing was prepared and presented on 7 December 1984, clarifying salient issues raised and including additional taskings directed by the USOFA. Full scale engineering development (FSED) was approved by the Under Secretary of the Army on 6 March 1985; however, the effort was restricted to one contractor instead of the initially planned dual-contractor effort. A 27-month accelerated program schedule was directed, with program completion planned for December 1987.

(U) Following this approval, the Determination and Findings (D&F) for FSED was signed and requests for proposals (rep) were released on 29 March 1985 to contractors selected during the system definition phase of the effort. A source selection evaluation board (SSEB) was subsequently convened to evaluate the proposals.

(U) A letter report was submitted to Congress in response to the 1985 Department of Defense Authorization Act, specifically the Committee conference item of special interest, Automatic Test Equipment. The report outlined Army doctrine for electronic maintenance of equipment which was being fielded and R&D requirements for testing equipment On 26 June 1985, Under the Secretary of the Army was notified by the Senate Committee on Armed Services that previous concerns about the IFTE program had been satisfied by the "Report on the Army Maintenance Doctrine and Army's R&D Plan For Testing Equipment" submitted in April, thereby approving release of funds to continue the program.

(U) During the fourth quarter (August 1985), the General Accounting Office (GAO) recommended suspension of the IFTE contract award. GOA concerns focused on the COEA developed to support the decision to award the development contract, which GAO felt included questionable assumptions and excluded some applicable costs. DOD responded to the GOA concerns on 17 September 1985 with determination that Army proceed with IFTE FSED. A $6.95 million contract was awarded to Grumman Aerospace on 18 September 1985 for the FSED effort. Quarterly program reviews were scheduled for the US beginning in January 1986. A subsequent follow-up analysis was being conducted by AMC and TRADOC concurrently with the FSED to address the concerns of the Under Secretary of the Army on the Army maintenance doctrine and level of IFTE employment.

Automatic Test Equipment (ATE) Policy (U)

(U) The Automatic Test Equipment (ATE) Policy, 1 November 1982, underwent revision during FY85 to include policy on IFTE and simplified Test Equipment (Expandable) (STE-X) and update existing guidance. The policy, June 1984, which included IFTE guidance was not implemented due to deferral of the FY84 program. This revision would establish a comprehensive single ATE policy--from unit to depot --for all system developers and users.

(U) Field comments and responses were evaluated for inclusion into the policy. The final policy was scheduled for release by 2QFY86.

TMDE Support to 3D Infantry Division and XVIII Airborne Corps (U)

(U) An information briefing on TMDE was presented on 30 August 1984 to the Vice Chief of Staff, Army (VCSA) and the Under Secretary of the Army. Two taskers resulted from this briefing. The first was to review the TMDE logistics support structure for the 3ID and report to the VCSA in 60 days on the details of TMDE and logistic support in wartime. The second was to conduct a similar analysis of the 18th Airborne Corps in a deployment mode to a contingency station in a wartime scenario for submission 30 days following the task.

(U) The 3ID laydown briefing was presented to the Vice Chief of Staff, Army on 15 June 1985, after a comprehensive data collection/validation effort. The briefing was presented by the PM, TMDE and covered data, displays and observations evaluated during the study effort.

(U) The data collection effort for the second descriptive laydown of TMDE support was convened with a working group effort at Ft. Bragg, North Carolina, 15-19 April 1985 and 29 April-3 May 1985 at US Army Central TMDE Activity, Lexington, Kentucky for finalization of the study. The results were documented and initial coordination was completed. This classified study showed how the XVIII Airborne Corps would be deployed, supported and resupplied, and the impact of selected force modernization systems that were or would be fielded to the contingency forces in terms of a "go-to-war" capability. Final coordination was expected to take place early in FY86.

Test Equipment Modernization (TEMOD) - Accelerated Fielding (U)

(U) In FY85 AMC learned how to do accelerated fielding of non-development general purpose TMDE. Even though improvements in the deployment process and basis of issue planning were required to sustain the rapid deployment achieved in FY85, the force modernization program again proved itself capable, through intensive management, this time for NDI equipment.

(U) The Army's TEMOD program had on 1984 found itself in a difficult position. Some 30,056 items of TEMOD equipment had reached the depot system. Of this, approximately 60 percent was at or beyond the normal 1 year manufacturers warranty period. The TEMOD equipment was needed to ensure supportability of new electronics prime systems and subsystems entering the field in ever increasing quantities. The challenge and goal for this true NDI program was to field the new items within 1 year of competitive production contract award (all TEMOD items were competitive procurements).

(U) In 1985, 10,221 equipment items of 13 types were deployed to seven MACOMs. This required 91 separate material fielding plans. During this same year, the TEMOD effort began to effectively purge the old, obsolete, or replaced TMDE from the field simultaneously as the new equipment was fielded.

(U) This success required innovations in handling fielding and turn-ins. The salient changes were use of the Department of the Army Letter of Authority to requisition and retain TEMOD equipment, to message Materiel Fielding Plans, to consolidate work loading and planning, and the development and use of a TEMOD milestone tracking system.

(U) TEMOD faced additional challenges which, when resolved, would further the deployability of the NDI items. Basis of issue planning efforts had to be made more responsive to cross-commodity/branch applications. Extension of manufacturer warranties from 1 to 3 years was being considered.

Publication of TMDE Fact Sheets (U)

(U) Three fact sheets--TMDE Role in the Materiel Acquisition Cycle, TMDE Calibration and Repair Support Program, and Test Equipment Modernization Program--were published in PM Notes #8, on 12 December 1985. The publication disseminated articles of interest to the Program Manager community. The fact sheets provided general information and guidance for PM interface in three of the major areas of the Army-wide TMDE program.

Revision of AR 750-43, Test, Measurement and Diagnostic Equipment (U)

(U) The initial draft change to AR 750-43 was completed during FY85 and was being staffed in FY86. The revision was prepared to incorporate recommendations from various sources, to include Tech Package Sets (TPS) policy as a separate chapter, and to revise existing policy. An AMC supplement was scheduled for preparation and publication approximately 60 days following publication of the AR.

Revision of AR 750-25, Army Test, Measurement and Diagnostic Equipment Calibration and Repair Support Program (U)

(U) Changes to AR 750-25 and TB 750-25 were proposed during FY 85 to include policies and procedures related to the completion of the consolidation of calibration support facilities and to establish TMDE support program goals at 95 percent and above for TMDE readiness. The remaining 5 percent would be comprised of 3 percent or below for owner/user delinquency and 2 percent and below for USATSG workload backlog. The net result was to increase the visibility of the Army-wide calibration program.

(U) A draft was completed and was being staffed in FY86. Publication was scheduled for the second quarter of FY86.

Cross-Training Within the TMDE Community (U)

(U) An informal cross-training program was initiated in AMC to provide TMDE personnel with opportunities to enhance their experiences by using temporary duty assignments to fill vacancies. TMDE operations at various Army organizations were uniquely specialized, but cross-training provided the experience /knowledge base among key personnel that would prove useful in interfacing functions.

(U) Training assignments included: USACTA Division Chief to a 120 day assignment at AMC, Office for TMDE Management to fill vacancy pending recruitment, the temporary assignment of an AMC Office for

TMDE Management, Program Integration Specialist, Office for the DCSEM Research, Development, and Acquisition; and the 120-day assignment of the DESCOM Division Chief as the Chief, Engineering Management Division, Office for TMDE Management, to fill a temporary vacancy.

Test Equipment Modernization (TEMOD) - Memorandum of Agreement (U)

(U) A Memorandum of Agreement (MOA) was prepared and signed by the Executive Director of TMDE and its Commanders of TRADOC, Intelligence and Security Command (INSCOM), Army Communications Command (USACC), and the Army Surgeon General (TSG) for implementation of its general purpose electronic test equipment (GPETE) Modernization Program. The MOA outlined the scope and intent of GPETE modernization efforts, defined responsibilities of the MACOMs and established policy for implementation of the program. It included the responsibilities of AMC, TRADOC, INSCOM, USACC, and TSG in identification and documentation efforts for acquisition of commercial off-the-shelf, state-of-the-art GPETE to meet existing and anticipated Army testing and measurement meeds.

Joint Panel on Automatic Testing (JP-AT) (U)

(U) The chairmanship of the JP-AT transferred from the Air Force Systems Command (AFSC) to AMC (Office for TMDE Management) on 1 January 1985. The panel was chartered by the Joint Logistics Commanders to facilitate interservice coordination of the Services' automatic test programs. It was comprised of a designated member from each command and had seven functional subpanels.

(U) The JP-AT met quarterly to review subpanel progress and provide guidance/tasking on future efforts. Three meetings were held in 85 since the chairmanship was transferred to AMC. They were held at Naval Ocean Systems Center in San Diego, California, on March 1985; at Kelly Air Force Base, San Antonio, Texas, in June, and an annual meeting was held in Lexington,Kentucky in November.

(U) Some of the panel's accomplishments were as follows:

a. MIL-STD-2165,Testability Program for Electronic Systems and Equipment, was approved by the DOD Standardization Office. The document was published in March.

b. A contract was issued by the Air Force System Command to IEEE to provide technical support for maintenance of the IEEE ATLAS 416/716 STD for the remainder of FY 85. This effort is joint-service funded project.

c. A draft joint command regulation which would transition the JP-AT to a staff-to-staff relationship was being finalized.

Organizational Data (U)

(U) USACTA was commanded by Colonel William Phillip Farmer. The organization had 3 military and 56 permanent civilian spaces. USACTA's overall budget was $3,325 thousand.

TMDE Management Information System (TEMIS) (U)

(U) TEMIS development at USACTA was on-going and was on schedule as of the end of FY85. Partial implementation of the system had been accomplished as of June 1985. By direction of the Assistant Deputy for Materiel Readiness, TEMIS underwent a reevaluation, and near-term (FY85) hardware requirements and associated funding were drastically reduced. In lieu of waiting for long term funding approval, and to preclude slippage of the project because of long lead time procurement of hardware, on 28 February 1985 AMC's DCSEM Information Management recommended and approved use of the ADPE Reutilization Program. In a joint effort by USACTA and MRSA, a MRSA-TEMIS Computer Configuration was designed, and approximately $1.3 million in excess ADP hardware was acquired at no cost except shipping/transportation charges. This computer hardware was in place in the MRSA computer room at yearend. The next milestone, Equipment Certification/Testing, was scheduled for completion 30 November 1985. It was anticipated that the system will be operational by 2QFY86.

DA Technical Bulletin (U)

USACTA continued to publish a technical bulletin, DA TB 43-001-61-Series EIR and Maintenance Digest TMDE, each quarter to disseminate technical information concerning TMDE activities to field units and higher commands. Since 1QCY83, 10 editions had been published.

TEMOD (U)

(U) USATA continued to support the Test Equipment Modernization Program during FY85 by participating in PM TEMOD sponsored Formal Market Investigation/Equipment Demonstrations, and TRADOC TMDE was usable, reliable, most effective to maintain, and suitable for Army requirements when fielded. Areas of activity included:

(1) Granting approval for acquisition
(2) Evaluating of Logistic Support Plans
(3) Review of TRADOC Letter Requirements, equipment specifications, independent evaluation plans, materiel funding documents and DOIP Feeder Data.
(4) Participating in Facility of Use Testing.
(5) Providing input to the expanded TMDE Modernization Program.

TMDE Requests (U)

(U) During FY85, 1,990 requests were processed by USACTA for a total of 37,731 items. This represented a total value of $348,661,614 from 80 different requesting agencies. It further represented a 10 percent increase in acquisition approval requests and a 23 percent increase in dollar value over FY 84 levels. Of this total, there were 120 disapprovals for 1,932 items costing $2,571,694. Continued efforts by USACTA to reduce proliferation resulted in the substitution of DA Preferred TMDE or previously/registered items in most of these disapproval cases. Emergency and priority TMDE acquisition requests processing was streamlined during FY 85 to allow completed action of a requirement within twenty-four to forty-eight hours after receipt.

TMDE Acquisition Management Briefing (U)

(U) A TMDE Acquisition Management Briefing was developed by USACTA during FY 85. It was presented on site to DESCOM Depot Equipment Managers and Force Modernization/ILS Managers, and to AMCCOM, AVSCOM, and TROSCOM Project Developers/TMDE Managers. These briefings addressed the Army's TMDE management structure, policies, acquisition approval/registration procedures and guidelines, TMDE governing documents and Materiel Developer/USACTA TMDE responsibility during system life cycle development phases. An atmosphere of understanding and improved working relationships within the TMDE community was created as the result of these briefings.

Preferred Items List Improvement (U)

(U) Efforts by USACTA to improve the DA TMDE Preferred Items List (PIL) were emphasized during FY85 as evidenced by the number and level of participants at recent biannual DA PIL In-Process Review Panel (DATPIP) meetings hosted by USACTA. This forum provided the TMDE Commodity Manager, Users or Developer an opportunity for input to the DA PIL and its formulation, and it evolved into a major TMDE conference. Innovative efforts were underway relative to format, functional coding and sectionalization. The USACTA goal continued to be proliferation control and standardization with emphasis on use of items in the PIL, TEMOD Program, and other type classified standard TMDE, and the reduction of non-standard items in the Army inventory.

Commerce Business Daily Review (U)

(U) Reviews by USACTA of TMDE procurements listed in the Commerce Business Daily during FY85 served as a guide to organizations conformity to acquisition approval procedures outlined in AR 750-43 and as a means to assure more thorough effective acquisition management. During this period, 42 solicitations of unauthorized TMDE acquisition were identified for follow-up action to the requestor. This effort resulted in assuring that TMDE was state-of-the-art and logistically supportable when fielded.

Assistance Visits (U)

(U) USACTA personnel participated in 93 visits, providing assistance and guidance to PMs and other materiel developers. Also, 20 visits were made of other mission related objectives. During these visits, USACTA representatives assisted in TMDE planning, selection, verification, testing, and support development. USACTA engineers and system analysts reviewed 24 requirements documents, 404 program documents, 112 test documents, and 424 Basic of Issue Plan/Qualitative and Quantitative Personnel Requirements Information (BOIP/QQPRI) documents to assure that TMDE (including ATE hardware/software) was adequately addressed.

(U) USACTA personnel also participated in 44 one-week visits in support of the Command Logistics Review and Aviation Resources Management Survey programs conducted by TRADOC, FORSCOM, and the National Guard Bureau. In addition, 19 visits were conducted supporting various ILS reviews to ensure that effective materiel fielding was accomplished and evaluated. Increased emphasis on materiel fielding resulted in the review of 279 Materiel Fielding Plans (MFP) and other related logistics plans and documents such as ARs, Sample Data Collections (SDC), Type Classifications (TC), SMART Initiatives, etc. These were reviewed and commented upon to ensure the overall performance and logistics supportability of fielded TMDE. This represented a 39 percent increase in USACTA's review and evaluation of TMDE-related performance and logistics supported documents.

(U) AR 750-43. A draft change 1 to AR 750-43 (TMDE) promised a more effective program of TMDE management Army-wide and was sent forward to AMC in October 1985 with that assessment.

(U) Manufacturer Facilities Visits. USACTA instituted a proactive pilot program to serve materiel developers by having TMDE specialists travel to manufacturer facilities to review, recommend, approve, and register TMDE on site. This methodology reduced

acquisition approval time in the Sergeant York program, substantially, and was continued in the Apache and Black Hawk programs. Other programs were to be added as they were identified.

US Army TMDE Support Group (USATSG) (U)

(U) Organizational Data. USATSG underwent a major increase in personnel and functions when it absorbed over 200 civilian spaces and responsibility for AMC internal calibration.[135] In addition, one civilian space was transferred to HQ AMC. Three warrant officers and 42 enlisted spaces approved for supply support for the three TMDE maintenance companies in Europe were lost but then restored as of 1 October 1985. In addition, the absorption of the AMC internal calibration and repair mission resulted in the gain of 1 warrant officer and 17 enlisted positions. In another action impacting on military personnel, nine positions located at Fort Bragg for the support of the 82d Airborne Division received the Paid Parachute Designation. Total authorizations as of the end of FY85 stood at 1,234 civilians and 964 military.

(U) Other internal organizational actions included the consolidation of administrative functions in the Headquarters and Headquarters Detachment, which involved the transfer of civilian spaces that had formerly been in the Office Services Division of the Program Management Directorate.

Program Management Directorate (U)

(U) Operating Budget. The USATSG operating budget for FY85 totalled $78.883 million, including $2.651 million in prior year funds.

FY85 USATSG OPERATING BUDGET (in millions)

	OPA	RDTE	OMA	OMAR	TOTAL
ARMY	12.595*	1.142	44.969	1.449	60.155
CUSTOMER	.156**	.500	18.072		18.728
TOTAL	12.751	1.642	63.041	1.449	78.883

* Includes $2.595 prior year funds.
**Includes 0.056 prior year funds.
Source: Executive Director TMDE, FY85 AHR submission.

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[135] See USATSAC discussion below.

(U) Procurement of Calibration Equipment. The Army, by Minutes of the FY84 Appropriations Act, was prohibited from purchasing calibration equipment without the prior approval of the Senate and House Appropriations Committees. That prohibition was lifted 25 October 1984, allowing USATSG to proceed with calibration procurements.

(U) JRL Protests on FMS Cases. Julie Research Laboratories protested procurements for the following FMS Cases:

(1) EG-UDG (RFP DAAH01-85-R-0360) Calibration Reference Set.
(2) EG UEK (RFP DAAH01-85-R-0361) Calibration Transfer Set.
(3) SR-VDE and-VDD (RFP DAAH01-85-R-0020) for seven Calibration Transfer Sets and one Secondary Reference Set.
(4) TW-YBP (RFP DAAH01-85-R-0567) one Secondary Reference Calibration Set.

(U) Environmental Enclosures at Pirmasens. A letter contract for installation of an Environmental Enclosure Laboratory (EELS) System in a leased warehouse in Pirmasens, Germany, was awarded 13 December 1984. The work began immediately thereafter. The letter contract was finalized on 2 May 1985 for $96,022. The installation was completed 5 August 1985. This environmental enclosure became the US Army Area Calibration and Repair Center, Pirmasens, Germany.

(U) Contracts for TMDE Repairs. In August 1984, time and materials contracts were awarded to Tektronix and Hewlett Packard for repair and calibration of TMDE manufactured by those companies. These contracts allowed ten USATSG-designated activities to ship their equipment directly to the contractor's nearest service center for repair. In July 1985, options were exercised to extend these contracts for another 12 months. In addition, the contracts were expanded to allow five more TMDE activities to use the contracts. In December 1984, a time and materials contract was awarded competitively to EIL, Inc., for the repair and calibration of all TMDE other than that manufactured by Tektronix and Hewlett Packard. This contract also allowed ten USATSG activities to ship their equipment to the nearest service center for repair. These awards concluded an effort which started approximately three years ago to improve the method of contracting repair and calibration.

(U) Independent Assessment of the Army TLD Program. In April 1985, an independent assessment by the National Academy of Science, National Research Council, of the radiological monitoring capabilities of the US Army was begun. The contract was awarded 18 April 1985 for $120,000. The assessment was to be completed and documented in a final report by February 1986.

(U) Procurement Tracking System. An automated procurement tracking system was established to monitor the progress of the procurement program. One hundred and fifty-five letters were issued. The procurement was to be released to the MICOM Procurement Directorate in November 1985. Requests for proposals were to be issued in January 1986,with award scheduled for June 1986. This was the first time that USATSG allowed and considered comments from industry on a specification before formal solicitation.

(U) USATSG Competitive Rate and Small Business Awards. The US Army TMDE Support Group Competition Rate for FY85 Direct Army Awards was 43 percent (68 percent for all awards including FMS and other customers). USATSG Small Business Awards for FY85 were 37 percent of the Direct Army Awards and 69 percent of all awards (including FMS and other customers).

(U) Purchase of Texas Instruments Electronic Data Terminals. USATSG purchased 115 Texas Instruments electronic data terminals, Silent 700, Model 765, which were previously leased to USATSG-CONUS and the 95th Maintenance Company. The purchase included a year's maintenance and achieved a cost avoidance of $50,705 in the first year, in contrast to previous years when conversion from lease to purchase was not cost effective.

Quality Assurance Office (U)

(U) The Quality Assurance Inspection Program, consisting of administrative and technical reviews, evaluated the overall capability of the TMDE support facility to perform its mission. The Quality Assurance Inspection Program replaced the AMC Surety Field Inspection and the DAIG Nuclear Weapons Technical Inspection for TMDE activities. The Quality Assurance Inspection Program had 260 TMDE laboratories and support units under surveillance. Firm intervals of 12, 18, and 24 months were established to help accomplish a higher percentage of the total inspections, resulting in a yearly average of 196 inspections. One hundred and twenty-eight inspections were scheduled for FY85, with 142 percent completed as of 30 September 1985. In addition to the onsite inspections, 23 selected laboratories were in the technical measurement audit program. During FY85, six units were found to have major discrepancies which required unit reinspection. A Quality Assurance Worldwide Workshop was held 18-22 March 1985. The workshop was attended by quality assurance personnel from USATSG, USATSAC, 95th Maintenance Battalion, and the 517th Maintenance Battalion. The purpose of the workshop was to discuss changes in the calibration, repair, and inspection program.

During the second quarter of FY85, a USATSG certification program and an outstanding QA award program were implemented to recognize those units displaying high standards of quality performance.

Operations Office (U)

(U) Revision of AR 750-25. A major revision was prepared to AR 750-25, Army Test, Measurement and Diagnostic Equipment Calibration and Repair Support Program, to update responsibilities and policies for the calibration and repair of TMDE. A draft copy of the proposed revision was prepared and staffed within USATSG. A coordination draft was developed using inputs from USATSG elements. The coordination draft was then to be staffed with AMC MSCs prior to staffing with the MACOMs.

(U) Materiel Acquisition Control. The USATSG Materiel Acquisition Control Officer processed 630 materiel acquisition requests in accordance with USATSG Regulation 715-2 during FY85. Of those processed, 456 were approved for procurement/requisition, 73 were cancelled/not approved, 131 were returned to the originator for additional information/justification, 18 were placed in hold status awaiting funds, and 52 were in process at Materiel Acquisition Review Board/US Army Central TMDE Activity at the end of FY85.

(U) Oplans/Mobilization. USATSG developed final support requirements for two AMC logistics plans (LOGPLANS) and provided continuous input to all other plans that included refinement of overall TMDE resource requirements. Also, it identified and subsequently resolved significant shortcomings in the continuity of operations (COOP) for all USATSG war plans.

The division also published Field Manual 29-27 and prepared a new J-series TOE for TMDE support companies. All TOE TMDE support organizations were brought into the AR 220-1 reporting system through USATSG efforts.

System Analysis Office (U)

(U) CALMIS Project. The objective of CALMIS was to establish a standard recall and control management information system (MIS) throughout USATSG on a stand-alone computer. Development of the software was completed in September 1985, the first delivery of Tactical Army Combat Service Support Computer System (TACCS) field units having gone to group headquarters the prior month. The 95th Maintenance Company received 11 TACCS field units in September and were trained on the TACCS hardware and Calmis software. CALMIS was

not implemented for the 95th Maintenance Company because of malfunctions of the TACCS streaming tape drive used to backup the files on the computer's hard disk.

(U) TEMIS Project. The TMDE Management Information System (TEMIS) project received approval authority to develop a centralized, comprehensive TMDE life cycle management information system. The USATSG was tasked to support in the development of the TEMIS data base and to assist the Central TMDE Activity (CTA) in its role as proponent agent for the project. During FY85, the Systems Analysis Office continued active participation in the project, providing core group membership on the project management team and providing data extracts from the USATSG data base for input into the TEMIS data base.

(U) CALSIM Project. The Calibration Simulation (CALSIM) project was restructured to provide a new computer model, CRYSTAL, that had faster turn around time and was easier to use but still maintained needed accuracy. The model was developed and was undergoing validation at the end of FY85. Compatible techniques and algorithms for data to be used in the model were areas of endeavor that were expected to reduce the level of manual effort required to prepare data for the CRYSTAL model.

(U) Calibration Interval. New techniques with faster processing time and more accurate products were developed for calibration interval analysis. These techniques were put in use and were expected to result in improved access to analysis and greater accuracy therein.

Metrology Directorate (U)

(U) AN/GSM-286 and 287 Transfer Set Modernization. A June 1984 report to the Senate Appropriations Committee defined USATSG's equipment modernization plans for FY85 through FY90. Action was taken during FY85 to implement the initial stages of this program by developing an updated concept report during March, April, and May of 1985, then briefed to the field during May and June. Documentation defining the first workstation was developed by USATSG during May, June and July. In July, MIS 35947 containing specifications for the CORE TMDE calibration workstation and the Army's plans for conducting a market survey and subsequent procurement were coordinated with Senate Appropriations Committee through HQ AMC. With AMC approval, the specification for the workstation and the market survey questionnaires were mailed to 155 manufacturers of electronic equipment. Of these, 21 responded, five in detail. A second survey solicited further comments on the specification. A materiel acquisition plan was drafted in September.

(U) International Standardization Organization (ISO) Shelter. USATSG was tasked by the Commander of AMC to develop a C-141 Aircraft transportable TMDE Support System for calibration and repair support of the 9th Infantry Division TMDE. One 3:1 ISO Shelter was borrowed from Natick Research and Development Center, Natick, Massachusetts, to evaluate its feasibility for use as a calibration and repair laboratory and shipping container for the AN/GSM-286/287 set. In the period from March to August, a prototype with roll-around benches was developed and tested at Fort Lewis 19-29 August 1985. Modifications included necessary center loading of racks, workbenches, and TMDE and a dedicated pallet for the shelter. The racks and workbenches for the center-loading modified prototype were thereafter assembled at Redstone Arsenal, and installation into the ISO shelter and further Fort Lewis testing was to occur in December 1985.

(U) Foam Dome. During the fourth quarter FY84, USATSG began investigation of quick reaction laboratory/storage construction. Principal investigations were centered around foam applications because of the simplicity of construction, good insulation properties, and the minimal amount of construction equipment/personnel required. The concept feasibility was demonstrated by USATSG personnel during January 1985 when a 36-foot diameter foam dome was constructed at Redstone Arsenal. The project was expanded to include one or more foam domes in Europe--50' diameter structures that would be used by the 517th Maintenance Battalion for storage of empty nucleonic waste containers in the Pirmasens area.

(U) Facilities. Construction of an 18,900 square foot, two-story metrology laboratory addition to USATSG Headquarters and Army Primary Standards Laboratory (colocated in building 5435 at Redstone Arsenal) was completed 19 April 1985. With the growth of the TMDE calibration and repair program worldwide due to the increasing numbers of high-technology equipment, need for additional laboratory space was recognized in the mid-1970's. A Military Construction, Army (MCA) project was formulated to meet those needs. After several years of defending the project at AMC and HQ DA levels, the project was approved for construction by Congress in 1983. A contract was let and construction began in February 1984. The new facility contained such special features as laboratory space for FAR-infrared lasers, millimeter wave, elctro-optics, radiometry, environmental and reliability testing, prototype development, and dynamic evaluation laboratories as well as space for the Systems Engineering Division and Systems Analysis Office.

(U) Another MCA project drew to completion in FY85 as five TMDE calibration and repair support facilities were brought into service. Three of the facilities, completed in March, were at Camps Casey,

Coiner, and Sears in Korea for the 74th Maintenance Battalion (TMDE). The remaining two were USATSAC facilities at Fort Benning, Georgia, and Fort Eustis, Virginia. The facilities, three running 3,200 square feet and two running 4,000, were designed to provide working space for TMDE calibration and repair at the AN/GSM-286 and AN/GSM-287 level.

(U) Design was completed on MCA projects for Fort Bragg and Fort Ord. These projects were Unspecified Minor MCA (UMMCA) projects, and due to shortfall of UMMCA funds, were deferred. The Fort Bragg project was reclassified to a regular Minor MCA (MMCA) project for the FY86 military construction budget submission and was expected to be approved by Congress in the 1st quarter of FY86.

(U) In addition, construction, alterations, and renovations were completed on numerous TMDE facilities using OMA funds. Some of these were continuations of required improvements; some were due to relocation, and some to assimilation of the former AMC internal calibration and repair facilities by USATSG in FY84/85. In CONUS, this included alterations at Fort Dix, New Jersey, Fort Riley, Kansas, and Fort Carson, Colorado. OCONUS, five sites in Germany had work completed on them during the fiscal year.

(U) TMDE Calibration and Repair Facilities Minor Renovation and Alteration Projects. In addition to the projects discussed above, minor renovation projects were accomplished at the following locations: Aberdeen Proving Ground, Fort Belvoir, Fort Gillem, Fort Lewis, Long Beach, Ludwigsburg, Panama, Pueblo, Sacaramento, Tooele, Watervliet, Redstone, and Letterkenny.

(U) The leased Bennett Facility alterations and renovations were completed by the owner in July 1985. This facility was the Area Calibration and Repair Center of the 524th Maintenance Company in Pirmasens, Germany. Installation of an Environmental Enclosure Laboratory System for the Area Calibration Laboratory was completed in August. The 524th moved all of its operations into the Bennett Facility that month with the exception of the headquarters, orderly room, billets, and motor pool.

(U) Research and Development. The Metrology Directorate appointed an R&D coordinator to consolidate research and development projects. A detailed Army Metrology Research, Development, and Engineering Plan would be produced in FY86. Points of contact for metrology research were being developed with elements of LABCOM and Army R&D centers nationwide. Thirteen points of contact were identified by 30 September 1985. Metrology R&D was identified in the 1986 budget as D594, a "new start" of $1.824 million.

(U) Gas Mask TMDE Support. In FY85 the Physical Standards and Development Laboratory was involved in supporting AMCCOM by calibrating the glass capillaries used by Pine Bluff Arsenal and Depot personnel. This supports the M4A1 Gas Mask Outlet Valve Tester used by AMCCOM personnel to periodically test all US Army gas masks. Several calibration systems were set up to accomplish this task. The systems were accurate to a 1 percent margin. One of the Systems was automated. Upwards of 200-300 capillaries were calibrated, serial numbered, and accepted or rejected. Before this work, AMCCOM lacked an organized logical system to do this job. An engineering task group was led by USATSG personnel on a project to develop a calibration procedure for the M14 Gas Mask Leakage Tester during 1985. A report was completed in May 1985 on the work of this task group at Pine Bluff Arsenal. Several significant problems were uncovered on this expedition.

(U) Laboratory Projects. During FY85 a number of improvements were made to laboratory capabilities. The volatile fluid flow capability was expanded from 75 to 250 gallons per minute. Installation of a calibration fluid pumping system for the new standard was in progress at the end of the year. The system was expected to be operational by mid-86. Facilities modification was completed for accommodation of a new manometer system which increased the laboratory capability from 62 to 108 inches of mercury. Completion of the manometer project was expected by the end of CY85. Reference laboratories received capability of calibrating the Bacharach MV-2 Mercury Vapor Sniffer. Finally, the start-up of the capillary calibration effort, a major new workload area, required new calibration techniques and the establishment of procedures for unit identification, test criteria, and test report records, and brought associated administrative problems.

(U) Torque Measurement. The metrology directorate made a visit to White Sands Missile Range to study a balanced loading system considered crucial in the Army Primary Standards Laboratory's decision to select a hybrid system capable of using deadweight assists at lower torque but not at higher torque values where a balanced loading system would take over. Such a system was currently in procurement. This approach was expected to overcome the problem associated with deadweight systems as torque values approach 20,000 lb-ft, namely, intolerable bearing loads, prohibitive expense, and cumbersome operation.

Logistics Directorate (U)

(U) Equipment Management. The USATSG received a satisfactory rating in the AMC Command Equipment and Supply Management Review (CESMR) conducted 5-9 November 1984. The review was a

follow-up/reinspection in the two areas that received unsatisfactory ratings during the December 1983 CESMR: authorization/reconciliation and mission supply support account operation. New procedures and proposed schedules were developed for conducting CESMR's within USATSG. A CESMR was conducted in the 74th Maintenance Battalion 30 September - 18 October 1985. Efforts were ongoing to automate the equipment redistribution, utilization, and authorization functions within the branch. Hardware was received and programs were in development. The Equipment management Branch began the process of converting W1PLLAA property record to the new AMC mandated installation equipment management system (IEMS) in September 1985 and simultaneously implemented the bar code inventory (BARCIS). This effort was expected to take a year to complete.

(U) Foreign Military Sales. Price, availability and serviceability (PAS) data were developed for 18 FMS cases, while case coordination and management were performed on a day-by-day basis on 43 active FMS cases. An equipment list for six major procurement actions was received for compliance with the AMC "total package" approach in support of weapons systems. In July 1985, Royal Jordanian Army representatives attended an In-Process Review conducted by US Army TMDE Support Group. In August 1985, Arab Republic of Egypt (ARE) representatives attended a 10-day orientation in TMDE management conducted by USATSG. In October 1985, Ridge Instruments, Inc. delivered the Transfer Calibration Set for FMS case Egypt EK. Four Program Management Review (PMR) conferences were attended by Security Assistance personnel: Jordan PMRs at St. Louis, Missouri and Redstone Arsenal, Taiwan PMR at Washington, D.C., and Jordan/Saudi Arabia PMR in the respective countries. During November and December 1984, the chief of the Security Assistance Division conducted a management review and liaison visit to Jordan and Saudi Arabia. Calibration assistance teams were sent by the USATSG to provide calibration support and technical assistance to Jordan (two teams), Morocco, Saudi Arabia (six teams), and Thailand (two teams). In addition a two-man survey team spent 40 days in Jordan supporting equipment and explaining staffing requirements. Also Taiwan was assisted by a representative who attended the PMR and coordinated the Environmental Enclosure delivery for that country.

(U) Publications. USATSG prepared and distributed concurrently with the deployment of materiel some 160 new or revised calibration procedures to support both calibration standards and TMDE. Some 1,400 calibration procedures were being maintained. Responses to over 500 DA Forms 2028, Recommended Changes to Publications, were completed within 15 days to support calibration technicians. In addition, to support force modernization TMDE for systems such as Pershing II, Black Hawk, M1 tank, and Bradley, the TEMOD program was supported with calibration procedures concurrent with deployment of

each item. During the same time, innovations reduced the number of calibration procedures required. With obvious savings in maintenance, preparation time, printing, storage, distribution, and recording, calibration procedures for generic groups of TMDE were combined so that four new calibration procedures would replace 46 existing procedures.

(U) AMC subordinate commands were surveyed by USATSG to purge automotive test equipment and replace it with simplified test equipment for internal combustion engines. They were also surveyed so that calibration intervals for highly reliable test equipment could be extended, perhaps to the point of eliminating the requirement. USATSG was thus instrumental in having AMCCOM purge obsolete automotive test equipment by deleting the equipment from their supply catalogs and having them turn in the equipment; calibration intervals for 44 items were extended and the requirement to calibrate 222 items was eliminated. These were matters of interest to Congress and GAO and were expedited to the field by USATSG correspondence and TB 43-180, Calibration and Repair Requirements for the Maintenance of Army Materiel.

(U) Fielding for the Pershing II system proved that state-of-the-art TMDE must be supported with state-of-the-art calibration procedures. The fielding resulted in USATSG absorbing the new mission of preparing automated calibration procedures. Six procedures were prepared and distributed to the calibration facilities which supported the Pershing II system. USATSG initiated efforts to establish an automated calibration procedures preparation facility. The facility would develop automated calibration procedures for TMDE similar to the Pershing II test equipment, which had to be calibrated through the IEEE bus and programmable circuits, as well as procedures for the new automated calibration standards being developed into workstations during the 1986-1990 timeframe. This new mission required additional training, manpower, and equipment.

(U) New Equipment Training. The New Equipment and Technology Training Division conducted eight calibration standards refresher course classes, graduating 44 students, personnel assigned to USATSAC and the 95th Maintenance Company. The Hewlett Packard 331A Synthesizer/Function Generator was added to the course, which also included classes on integrated circuits, microprocessors, and the 7613 Oscilloscope System. Instructor and key personnel training was conducted for the AN/USM-489 Spectrum Analyzer, the HP 335A Synthesizer/Level Generator, and the Tactical Army Combat Service Support Computer System as well.

US Army TMDE Support Activity-CONUS (U)

(U) Internal Calibration Laboratories. USATSG central managerial control over all AMC internal calibration facilities (ICF) came about in FY85 through implementation by the US Army TMDE Support Activity-CONUS (USATSAC). The plan was approved by HQ AMC in FY84 and required command and control of 27 missions by 1 October 1985, proceeding first with DESCOM missions by 1 October 1984, all TECOM missions by 1 June 1985, and the remainder the following October. The TECOM missions were actually assumed 1 January 1985 and the rest by 1 June 1985, four months ahead of schedule.

(U) Support Consolidations. Prior to 30 September 1985, DESCOM had operated an ICF at Sierra Depot, Herlong, California. This facility was abolished on 1 October 1985. With transfer of the SEAD ICF to USATSG on 1 October 1984, plans were developed to discontinue the use of a mobile TMDE support team (MTST) from Sacramento ACRC for support of the Salt Lake City area workload; instead, an MTST from the TMDE Support Center (TSC)-Tooele. This realignment also eliminated the Tooele support of Umatilla Army Depot Activity (UMAD), Hermiston, Oregon. UMAD support came thereafter from the Fort Lewis MTST. One of the two calibration facilities operating at White Sands Missile Rang (WSMR) was transferred to avoid duplication. Action was initiated to phase out WSMR mobile support through the MTST from TMDE Support Operation (TSO)-Fort Bliss, eliminating costly duplication of mobile TMDE support team stops. When the Army Materiel Mechanics Research Center (AMMRC) and Natick Research and Development Center TMDE support Missions transferred to USATSG, USATSAC determined that the two missions could be effectively accomplished by consolidating both at AMMRC where a larger, more fully-equipped laboratory was capable of providing effective and more cost efficient support. With the establishment of an Interservice Support Agreement (ISA) with the Marine Corps Depot at Barstow, California, USATSG eliminated the MTST operating from the Long Beach TSO to support Fort Irwin.

(U) Personnel. Transfer of the 27 ICFs increased USATSAC's work force authorization from 730 spaces, which included 572 permanent civilians, 40 overhire civilians, and 118 military in FY84, to a total of 1,028 authorized spaces at the end of FY85. The FY85 authorization included 827 permanent civilian spaces, 54 overhire civilians, and 147 authorized military.

Personnel Transfers to USATSAC (U)

	MISSION TRANSFERRED	SPACES TRANSFERRED CIV	MIL
DESCOM	1 Oct 84	195	0
TACOM	1 Jan 85	10	0
TECOM	1 Jan 85	61	10
AMMRC	1 Apr 85	4	2
Natick	1 Apr 85	2	2
ERADCOM	1 May 85	36	3
AMCCOM	1 May 85	36	8
Vint Hill	1 Jun 85	1	5

Source: Executive Director TMDE, FY85 AHR submission

(U) The USATSAC continued to experience recruiting difficulties at the GS-09 level during FY85. Long waiting periods of up to six months for an OPM listing were reported as common occurrences. In some cases the list, when finally received, contained only one or two names and usually these personnel were no longer available for employment. The loss of highly qualified technicians to higher graded jobs on the installation and to the higher paying commercial sector compounded the recruitment problems. The assignment of military technicians to USATSAC elements and the prudent use of overtime were significant factors in preventing deterioration of the mission performance. A total of 147 military personnel were on board against an authorization of 147 at the end of FY85.

(U) Financial Management. The USATSAC program budget guidance (PBG) for FY85 was $37.9 million. Obligations against the PBG ran to 96 percent. Some contributing factors to the less than 100 percent obligation were the large number of vacancies, the AMC hiring freeze imposed in August 1985, and lengthy recruiting time. The FY85 PBG reflected a 50 percent increase over FY84. This was due to transfer of the internal calibration mission to USATSG from the AMC MSCs. Dollars involved in this transfer were approximately $7.1 million from DESCOM, $458,500 from ERADCOM, $606,500 from AMCCOM, $350,000 from TACOM, $3.1 million from TECOM, and $68,600 from remaining commands, for a total of $11.7 million.

USATSAC Budget, End of FY85
(in millions of dollars)

	Program/Budget Guidance (PBG)	Obligations	Percent Utilized
Direct Army	$17.0	17.0	100
National Guard	4.3	3.5	81
Army Reserve	1.4	1.4	100
Other Customers	15.2	14.4	95
TOTAL	$37.9	36.3	96

Source: Executive Director TMDE, FY85 AHR submission

(U) Production. By the end of FY85, the number of items supported by USATSAC had increased from 279,809 to 316,428, a 13 percent gain which was due to the transfer of the ICF missions. A total of 578,319 calibration and repair actions were reported by all elements of USATSAC during this period, including the 27 new ICF missions. USATSAC as a whole maintained an availability rate above 97 percent throughout FY85 despite adjustment in workload and mission transfers. The availability rate at the end of FY84 was 97.6 percent while the rate at the end of FY85 was 97.4, percent with only slight fluctuation during the year.

(U) Quality. Surity FY85 USATSAC elements participated in a total of 42 quality audits. Agreement was found in 33 of the audits conducted. Two "no agreements" were found but have since been reaudited and found to be in agreement. Seven audits were still in progress at the end of the year. In FY85, USATSAC elements were inspected by USATSG quality Assurance teams. A total of three unsatisfactory ratings resulted. These were later reinspected and found to be satisfactory. Two reinspections of unsatisfactory ratings found in FY84 were also conducted and found to be satisfactory.

(U) Facility Improvements. A total of $742,950 was spent in FY85 to construct new laboratory facilities at Forts Benning and Eustis. An additional $286,000 was spent on building modifications at Forts Dix, Riley, Sill and Pine Bluff. These improvements are reflected in the discussion of facility upgrades within the USATSG discussed within the Metrology Directorate section.

(U) Automation Improvements. As the result of the assumption of AMC ICF missions at USATSAC, DESCOM ICFs' calibration recall files were transferred to the US Army Missile Command (MICOM) computer and began reporting to the TMDE Recall and Control System (TRACS) in the

first quarter FY85. Seven CPT word processing systems having intercommunications capabilities with the USATSAC Redstone Arsenal system were fielded. Eleven Courier terminals were fielded during FY85 for accessing the MICOM mainframe computer. To alleviate TDY shortages for remote field activities, one Courier terminal was located at Lexington ACRC and two terminals were placed at Fort Huachuca TSC. Two additional Courier terminals were added to the headquarters support operation allowing direct inquiry and update of financial and procurement requisition data bases. A Digital Equipment Corporation Rainbow 100 with letter quality printer was obtained for use in automating USATSAC support functions.

(U) Chemical Agent Alarms and Monitors. During FY85, extensive work was done to establish capability to support chemical agent alarms and monitors (M43A1 and CAM). This effort was nearly complete and preparations were underway to gear up for similar requirements for future alarms for other Army equipment being fielded with radioactive sources.

(U) Area Ionization Radiation Dosimetry Center. The measurement technique conversion of the US Army dosimetry program from photodosimetry using film to thermoluminescent dosimetry (TLD) was underway at the Area Ionization Radiation Dosimetry Center (AIRDC) located at Lexington-Bluegrass Army Depot (LBAD). An element of the Eastern Operations Division (EOD), USATSAC, the AIRDC accepted the Panasonic-supplied instrumentation system on 10 June 1985. The conversion, when completed in FY88, was to provide dosimetry program customers with a reusable badge capable of monitoring a more complete assortment of radiation types experienced in Army work activities. Also, since the evaluation process for the badge is automated, manpower resources at the AIRDC could be stabilized and used in the center's other missions, such as wipe test analysis and special radiation monitoring device fabrication.

95th Maintenance Company (U)

(U) FY85 also brought a broadening of the scope of mission to the 95th Maintenance Company (TMDE). It exercised its worldwide contingency mission by deploying Base TMDE Support Team 22 to Mainz Army Depot. The unit also saw an update of equipment through TEMOD fielding. The fielding of microcomputers to 10 detachments throughout CONUS promised to improve the support provided customers. The Area TMDE Support Teams (ATST) of the 95th, which provided dedicated and deployable support to the ten FORSCOM divisions, were renumbered to reflect each division's numerical designator. This was done to enhance rapport with the divisions and reduce confusion among personnel who did not deal with the ATSTs on a daily basis. A common task field training exercise (FTX) was accomplished by 95th

Maintenance Headquarters during March 1984. The objective was to implement and evaluate common task training in a field environment. This FTX brought this aspect of training up to standard and significantly improved unit readiness. On 24 May 1985, the company underwent a change of command. The incoming commander, CPT Barbaras L. Pagano, came to the unit from the Ordnance Officer Advanced Course. The outgoing commander, CPT Harry S. Hamilton, departed to his next assignment at the ROTC Detachment at Weber State College, Ogden, Utah. The unit chaired the Warrant Officer MOS 252A Task Site Selection Board at Fort Gordon on 23-27 July 1985. This was the first time that such a board was convened for the MOS.

Program Manager for Test, Measurement and Diagnostic Equipment (U)

Organization (U)

(U) Personnel. COL Douglas H. Harclay continued as the Program Manager for Test, Measurement, and Diagnostic Equipment (PM, TMDE). The Product Manager, TEMOD, LTC Robert C. White, retired in July 1985 and the Deputy Product Manager, Richard Pribyl, was designated Acting Product Manager in the interim. In September, LTC Bruce D. Sweeney was named PM, TEMOD and assumed his duties at that time. The charter for the Product Manager, Test Program Sets (PM, TPS) was approved first quarter, FY85. LTC Steven Butcher was designated PM.

(U) PM, TMDE personnel strength was below authorized levels for civilian workers throughout the year, with 106 workers at the beginning and the end of the year against 141 authorized slots. The military officers numbered 12 at the beginning of the year and 10 at the end, a decline corresponding to the decline from 16 to 14 officer spaces. Both enlisted positions were filled on 1 October 1984 and again at year's end.

(U) Mission Changes. DRCTM-E Message, 172000Z Jan 84, subject: TPS Program Set (TPS) Management, formally directed the CECOM Commander and PM, TMDE to take the lead in managing the Army-wide TPS functions, which included establishing uniform TPS policies, developing TPS models and monitoring Army-wide TPS activities.

(U) The PM, TMDE established a TPS Management Task Force under the direction and operational control of the Product Manager, Automatic Test Support Systems (PM, ATSS) by DRCPM-TMDE-P letter, dated 13 April 1984, subject: Test Program Sets (TPS) Management Task Force. The PM, TMDE also took action to establish a division level organization, under the PM, ATSS organization utilizing available PM resources within their approved TDA.

(U) Funding Profile. The FY85 funding profile was as follows (in $000):

	Program Direct	Obligations	Carryover
OMA	3,922	3,022	0
RDTEA	14,488	14,257	191
APA	33,490	31,284	2,206

	Program Reimbursable	Obligations	Carryover
OMA	0	0	0
RDTEA	132	125	0
APA	249	249	0

(U) In PA appropriation, programmed funds were increased by $3.2 million with no payback to complete multiyear procurement of GRM-114A, by $650 thousand which was to be paid back to complete multiyear procurement of AN/USM-488, and by $833 thousand which was an MSC action to fund high priority unfinanced requirement, TS-4084. In OMA appropriation, total POM effort increased $1.45 million, yet $200 thousand less was consumed by direct operating requirements, as a PA-reimbursed production and engineering function was established and 10 other positions were withdrawn from RDTE. However, other support requirements were initiated: Material fielding support of AN/MSM-105; purge planning to support the TEMOD program and logistics planning; additional technical documentation for AN/MSM-105 and TEMOD items; TEMOD systems engineering; a new mission for TPS Standards/Tools, as directed by CG, AMC.

(U) In RDTE, fund release was not authorized until January for selected projects, and until August for projects which were subject to review by the Under Secretary of the Army prior to that congressional notification required by the FY85 DOD Authorization Act for their release. Prior to FY85 release, major RDTE elements of PM, TMDE were sustained by carryover funds which permitted continuation of priority programs in the areas of PIN Electronics[136] and Electro-Optic testing advance development. Carryover funds also supported the Source Selection Evaluation Board (SSEB) and IFN for initiation of Intermediate Forward Test Equipment (IFTE).

(U) FY85 programs included continuation of PIN Electronics and Electro-Optics, continuation and new requirements for STE-X FSED, initiation of Automated TPS System Environment, initiation of test

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[136] For PIN electronics, see FY84 AHR.

support analysis model, acquisition of ADPE and ADPE network, funding of metrology and calibration initiation, and finally, on 19 September 1985, award of a firm fixed price contract for IFIT FSED. In the area of customer programs, PM, TMDE began two efforts for Army Development and Employment Agency (ADEA), TMDE upgrade and ATE, both of which were funded by ADEA.

(U) Force Modernization. Among program accomplishments by PM, TMDE, was AN/MSM-105(V), which was a designated Force Modernization system and which included the OQ-290/MSM and OA-8-8991/MSM, Test/Repair Facilities. The AN/MSM-105(v)1 was a general purpose, transportable, field test and repair system for General Support (GS) level maintenance of selected electronic material. It provided diagnostic performance and fault isolation test capability for digital, analog and hybrid electronic line replaceable units (LRU) and printed circuit boards (PCB). It also provided a precision electronics repair capability, i.e., replacement of piece parts, for selected LRUs and PCBs. As of October 1985, of the 35 procured systems three had been fielded in USAREUR, one had been fielded in Korea, and eleven had been fielded in CONUS.

(U) Test Support Analysis Model. An effort had been pursued for the establishment of a management model to establish procedures and methodology for assessing and optimizing test equipment requirements and support plans. The Test Support Analysis Model (TSAM), once developed and tested, would be utilized at both the individual weapon system and Army Force Structure levels. The model would define procedures and responsibilities for planning and managing TMDE requirements throughout a weapon systems life cycle. The impact on system design and support plans would be assessed by addressing tradeoffs in Built-in-Test, Testability, Levels of Repair (LOR), TMDE inventory and Force Structure requirements and associated risk. The TSAM areas of analysis were supported by a group of models addressing each of the decision areas. Optimization within and between decision areas was expected ultimately to produce a coordinated system/Army test and support plans with acceptable operational, cost, land risk levels.

(U) Intermediate Forward Test Equipment. The Intermediate Forward Test Equipment (IFTE) was Army's program of developing automatic test equipment (ATE) that would be reconfigurable to support weapon system commodities. The IFTE for tactical use was to consist of: a base shop test facility (BSTF) and a contact test set (CTS). The BSTF was to contain up to two BST stations (BSTS) in an S-280 shelter mounted on a 5-ton truck. It was being developed as a modular system of ATE which would support repair of LRUs through PCB screening and replacement. Variants were to be designed to support specific weapon systems or commodities. The BSTF would be capable of

expanding test capabilities to meet new test requirements with minimal new development. The CTS would be a man-portable unit employed by intermediate level maintenance contact support teams. It was to be used to identify failed LRUs by augmenting built-in-test/built-in-test equipment (BIT/BITE) in a system. The CTS was to be configurable to support specific systems through plug-in, pull-out modules. The BSTF was being designed to execute TPSs previously designed for the AN/MSM-105.

(U) In addition to the BSTF and CTS, a non-tactical system called the Commercial Equivalent Equipment (CEE) was to be developed for use by weapon system developers. The CEE was the functional equivalent to the BSTS and would be used by contractors for TPS development and by depots in lieu of the BSTS.

(U) The IFTE program was structured around a three-phase acquisition strategy that allowed maximum competition by industry in responding to the Government's program requirements. Phase I was a systems definition phase which was awarded in June 1983 to five contractors: Boeing, Emerson, General Dynamics, Grumman, and RCA. The contractors provided different systems concepts to meet the Government's requirements. The contract was a six-month firm fixed price (FFP) effort and was completed on 29 December 1983. The contractors delivered "A" level and draft "B" level specifications, design plans, system studies/trade-offs on such topics as system architecture, field survivability, integrated logistics support and TPS development, reliability, maintainability and logistics program plans.

(U) Phase II, FSED, was awarded 18 September 1985 to the Grumman Aerospace Corporation for $6.9 million, following approval by the Under Secretary of the Army. The effort was limited to one contractor instead of two as previously planned. During FSED, the IFTE components would be designed, developed, fabricated and tested against contractor-developed B1 and B5 specifications.

(U) Phase III, the initial production phase of the IFTE, was to be awarded to the FSED contractor to insure smooth transition from development and attainment of IOC as rapidly as possible. The initial production phase was to include procurement of IFTE system and validation of the technical data package (TDP) to allow maximum competition for future IFTE procurements. To further insure a producible TDP, a study contract was to be awarded to a major ATE producer to review the TDP and the initial production contractor's production facilitation. A producibility report would be required for the Government prior to release of the competitive TDP.

(U) Electro-Optics Test Facility. As a subset of the IFTE program, the Electro-Optics Test Facility (EOTF) would be housed in a vehicle-mounted shelter. The EOTF was to be reconfigurable to provide fault isolation and diagnostic capability to the LRU level.

(U) A Phase I cost-plus-fixed-fee concept definition contract was awarded to Prospective Computer Analysis, Inc. in July 1984. During FY85, draft specifications were received as contract deliverables. Program slippage occurred due to data collection, delay in approval of the IFTE program, and funding constraints. Final deliverables were received from the contractor in October 1985, and the Phase I contract was extended for an additional six months to further define system requirements. Upon completion of the concept definition effort, two courses would be available: should industry have proved the technology to develop an EOTF prototype, FSED could proceed; if not, an advanced development (AD) effort would be initiated.

(U) Simplified Test Equipment - Expandable. The Simplified Test Equipment - Expandable (STE-X) was the organizational member of the Automated Test Support Systems (ATSS) family. STE-X was intended to provide the forward support combat vehicle mechanic with a simple and rapid means of diagnosing and assessing the condition of a combat vehicle in its "as is" condition. The application included automated test of vehicle power packs, hull systems, and turret systems. The STE-X was planned to be the single standard test set for on-line diagnostics of all current combat vehicles, including the Abrams tank and the Bradley Fighting Vehicle. It would be readily expandable for application to future vehicle developments, as well. STE-X was being developed by TACOM under the direction of PM, ATSS.

(U) In December 1984, the STE-X contract was renegotiated from a cost-plus-incentive-fee (CPIF) to a cost-plus-fixed-fee (CPFF) contract based on a determination that that was in the best interest of the Government. A reduction of $44 thousand in fee dollars resulted from the change.

(U) Two additional STE-X test sets were procured in July 1985 from RCA in order to meet the Reliability, Availability, Maintainability (RAM) requirements for the second round of design tests and operational tests (DT/OT II), raising the number of test sets purchased to eight.

(U) On 8 and 9 August 1985, a Test Integration Working Group (TIWG) was held prior to the start of DT/OT II. Numerous TRADOC concerns and problems were raised at the meeting which resulted in postponing the start of DT from 19 August to 9 October 1985. Problems included slippage of Engineering Design Test (EDT), impacting

availability of the test sets, and coordination between the contractor and TRADOC, delaying TRADOC training approval for key/instructor personnel. The OT was postponed from 19 August 1985 to 6 February 1986 for a number of reasons: nonavailability of sufficient numbers of test personnel and scorers to conduct the OT as defined by the TRADOC proponent, reevaluation of the original STE-X OT requirements by TRADOC, RAM hours, confidence levels/factor, multi-shift testing, and critical MOSs for school, tactical, and test personnel. In addition, Organizational and Operational (O&O) concept approval had to be obtained.

(U) Funding for contractual efforts was again a problem in the program. The STE-X funding line was tied into the IFTE program. Due to the funding uncertainty of the IFTE program, TACOM funded $2.99 thousand of the contractual funds necessary to continue the STE-X program on schedule out of their MMT/MACI funds. As soon as IFTE funds were released, in August 1985, the funds were immediately reprogrammed from HQ AMC to TACOM.

(U) The FY85 accomplishments included continued engineering design tests on test units, completed system software release 5, training for DT II, completed application software, completed initial delivery of the Support Material List, completed assembly of two additional STE-X core/main frames, and completed delivery of a preliminary TDP.

(U) Simplified Test Equipment/Internal Combustion Engine - Reprogrammable. TACOM developed the Simplified Test Equipment for Internal Combustion Engine (STE/ICE) which performed all necessary test measurements in vehicle engines, electrical systems, and associated components/subsystems. Its test capabilities included conventional measurements such as engine RPM, pressure, vacuum, voltage, current, resistance, temperature, and a series of special dynamic tests to determine engine power, compression balance, and condition of the batteries and starter circuit. STE/ICE was fielded at the unit/organizational level, but was also fielded at intermediate direct support and general support as an interim tester.

(U) The STE/ICE-R was a product improvement of the STE/ICE, PIP 1-82-07-4000, instituted in FY82 by TACOM. An unfunded PIP was transferred to TMDE in FY84. The program gained funding and a contract was planned for FY86. A PIP verification test began at TECOM in September 1985. STE/ICE-R, like STE/ICE, performed all essential tests and measurements on internal combustion engine powered material (except missiles and aircraft). Future vehicle systems were to have on-board diagnostic connectors to which the STE/ICE-R could be attached. It differed from its ancestor in having

an additional 34K of Read Only Memory (ROM). STE/ICE-R could be reprogrammed externally due to its electronically erasable programmable ROM (E^2 PROM) chips. One STE/ICE-R could reprogram up to 10 other units in approximately 10 minutes. A production contract was planned to procure some 8,400 sets.

(U) Under the PIP, the currently fielded STE/ICE sets would be modified to the STE/ICE-R configuration. To the user, the appearance of the units was the same. The addition of a new power supply would give STE/ICE-R the capability for future noncontact and microwave sensor diagnostic capability.

(U) Test Equipment Modernization. The PM, TEMOD was responsible for the management and execution of the Army Test, Measurement and Diagnostic Equipment (TMDE) Modernization (TEMOD) program. The program sought to acquire and field up-to-date, state-of-the-art TMDE as replacements for TMDE that was costly to maintain, obsolete, or cluttered with multiple versions of the same generic types. Upon its inception, PM, TEMOD was confronted with an Army inventory of some 2,500 makes and models of existing general purpose TMDE. The goal of TEMOD was to reduce the number of general purpose TMDE to approximately 65. Accomplishment of that goal was calculated to achieve such benefits as reducing of TMDE density, control of TMDE proliferation, promotion of TMDE standardization, improvement of Army materiel readiness through increased availability and production, and reduction of the TMDE logistical burden.

(U) PM, TMDE used a multi-year procurement approach to acquire the total authorized acquisition objective for the Army as a one-time buy, an approach calculated to assure the Army of significant cost savings. As of FY85, the TEMOD program had purchased 19 makes and models of general purpose TMDE with a total cost of approximately $100 million, saving the Government $35 million, or 26 percent. Five items were fielded, replacing 300 makes and models.

(U) In February 1985, one fixed price, multi-year test equipment production contract was competitively awarded to Tektronix, Inc. The 1000 TS-4084 distortion analyzers obtained would replace a dozen different makes and models being fielded in 1985.

(U) AN/MSM-105(v)1 Test and Repair Facility, Electronic Equipment. Eight AN/MSM-105(V)1s were fielded in FY85. The first of these test and repair facilities was fielded to the 647th Light Equipment Maintenance (LEM) Company at Fort Hood, Texas, in October 1984. The second fielding occurred in November 1984 at the DIO Maintenance C&E Shop at Fort Stewart, Georgia. It was also fielded successfully to the Pirmasens COMMEL Maintenance Center in Germany in December 1984. Another fielding was completed in February 1985 to

the 556th Maintenance Company at Fort Riley, Kansas. Another fielding of the advanced test and repair facility was completed in March 1985 with the 347th Transportation Company, Fort Shafter, Hawaii. Three additional CONUS fieldings were achieved during the fiscal year with the fielding to the TRADOC School at Fort Devins, Maine, in April, the 584th Maintenance Company, Fort Campbell, Kentucky, in July, and the 73rd Maintenance Company, Fort Carson, Colorado, in September 1985.

(U) Staging of the the major end items for the AN/MSM-105(V)1 occurred at Tobyhanna Army Depot, Pennsylvania. This included the OQ-290, Test Facility; the OA-8991, Repair Facility, the 5-ton tractor, the 3/4-ton trailer and the 5/4-ton truck.

(U) PM, ATSS requisitioned all Essential Repair Parts Stockage List (ERPSL) items using a modified push method which required coordination with the requisitioning units for the appropriate fund cites and requisition document numbers. The AN/MSM-105(V)1 was not designated an AMC TP/UMF weapon system, but PM, ATSS was planning transition of it into a TP/UMF by first quarter, FY88.

(U) AN/MSM-410(v) - Electronic Equipment Test Station. A contract was awarded to RCA to procure ten AN/USM-410s for $9.4 million with customer funds on 27 March 1985. The customer, Sergeant York Division Air Defense, terminated on 28 August 1985, and the test unit procurement was terminated for the convenience of the Government in October 1985. The total buyout was 146 systems. The assets were to be transferred to PM, ATSS, going into storage for redistribution on an as required basis.

(U) Army Test, Measurement, and Diagnostic Technology Office. ATTO--the Army Test, Measurement, and Diagnostic Technology Office--initiated efforts in several areas. It instituted a methodology to reduce ATE size, cost and complexity with developing new technologies to produce ATE capable of testing the equipment systems of the 1990s and beyond. It established methodology to ensure cost effective detection/isolation of system failure throughout its life cycle. It explored concepts and methodology to test Army weapon systems through advanced communication techniques, such as spread spectrum and frequency hopping, millimeter wave, very high speed integrated circuits, fiber-optics, and electro-optics technologies. In addition, at the direction of the CG, AMC, the ATTO was establishing a BIT/BITE Center of Excellence for the entire Army community. The technology base program being pursued by the center was aimed at providing solutions to the Army's maintenance, repair, diagnostic, and prognostic deficiencies in the field.

(U) As part of an effort to manage a standard ATE language, ATTO was in the process of developing the Army TPS Support Environment (ATSE). A contract for the design and development of ATSE was awarded to the Grumman Aerospace Corporation, Melville, New York, on 27 June 1985. ATSE would provide all Army programmers with a common operating system environment interacting with ADA, the Army standard computer language, and a common set of software tools and aids. With ATSE, TPS developers would be relieved of the disadvantages of using many different test programmers, with varied skill levels and experience, which led to errors and use of non-standard test languages as well as swelling TPS costs. The contract called for a 48-month effort. The ATSE contract was cost-plus-award-fee (CPAF), unusual for Fort Monmouth and considered to have precedent-setting implications. A post-award conference was held at Grumman on 15-16 November 1985.

(U) At the end of FY85, ATTO was pursuing establishment of a program for exploring areas of concern in prognostics, soft fault tracking, and selection of BIT/BITE parameters. The effort (6.3 funds) aimed at meeting a recognized need for technology base efforts in the TMDE arena not being satisfied by industry or academia. On 4 September 1985, PM, TMDE briefed a representative of the Office of the Army Director of Research and Technology on the 6.2 RDT&E technology base program for ATTO.

(U) 9th Infantry Division. A Memorandum of Understanding (MOU) to support the 9th Infantry Division (9ID) High Technology Motorized Division (HTMD) was developed in FY83 by the AMC-MSA and the AMC TMDE Management Office, formalizing a systemic approach by materiel developers, combat developers, and users to improve the modernization of TMDE in the HTMD. The TMDE program (subsequently designated High Technology Light Division) was designed to identify and provide the optimum mix of state-of-the-art, general purpose, manual, and automatic test equipment required to support the 9ID (MTZ) during the transition and post-FY86 periods. The TMDE community was instrumental in supporting the 9ID transition to a HTLD during FY85 by providing expertise and assistance in technical, logistic, and planning, programming and budgeting areas.

(U) For the TMDE program, a program management plan (PMP) was developed to integrate the manual and Automatic Test Equipment (ATE) into a time-phased systems approach. This changed the traditional Army practice of fielding TMDE to support a system to a process of developing test envelopes and parameters which support units are required to measure. A review of the PMP was scheduled for first quarter FY86, with a projected completion date of the third quarter of that year. In this manner, a family of small, lightweight, general purpose manual and ATE required to support the

9ID (MTZ) would be identified. An iteration process would be employed to provide horizontal and vertical standardization of commodities and units. The reduction of TMDE quantities and types achieved would also reduce the numbers of associated MOSs required. Continuing projects of TMDE upgrade and ATE upgrade were planned, the result being an increased capability to support the high technology forces with less equipment and manpower. ADEA would assess the benefits and utility of the resultant TMDE systems in written reports. ODCSLOG directed that the 9ID (MTZ) TMDE modernization process, developed by ADEA, be institutionalized for Army-wide benefit.

(U) The existing Army program addressed mainly the TMDE issues behind the division rear boundary with emphasis on organizational and DS unit capabilities. Efforts being conducted during FY85 in these units included evaluation of AN/USM-465A and OQ-319/U, upgrade and modernization of TMDE, bench top analyses and ISOPOD/transit case application. Of a three-phased test of AN/USM-465A and OQ-319/U to evaluate the use of such equipment at DS level, the first two phases were completed--training evaluation and pilot test. The third phase, field testing, was scheduled for completion 8 November 1985.

(U) The TMDE upgrade, under PM, TEMOD, was a task of identifying inadequate or obsolete TMDE within sets, kits, and outfits in selected 9ID (MTZ) units and replacing those items with TMDE modernization items (using the bench top analysis (BTA) method). The TMDE modernization items would be evaluated by the following 9ID (MTZ) using units: 9th Signal Battalion (Bn), 4th Aviation Support Bn, 5th Maintenance Support Bn, 3d Forward Support Bn, 109th Military Intelligence (MI) Bn, and 542d (I Corps). The results of the appraisals were planned for use in arriving at the optimum configuration of TMDE within the division. The data would also provide insights into Army-wide applicability.

(U) TEMOD's effort involved performing BTA within each of the using battalions to analyze the maintenance requirements as the direct support level (DS) of systems supported by the maintenance activity of direct support unit specified. Once the maintenance requirements were identified, resulting data could be evaluated to determine the actual TMDE requirement. After determining the TMDE requirements, other factors involving the specific mission requirements of the maintenance activity of DSU being evaluated were considered in order to develop a recommended TMDE profile, (that is, a list of TMDE makes and models with recommended densities).

(U) Results of the BTAs conducted in FY85 were as follows:

TMDE Authorized

9th Signal Bn	Design TOE	TMDE Recommended	Percent
Reduction			
Quantities	101	67	34
Makes/Models	34	16	53
Volume (ft^3)	105	46	56
Weight (lbs)	2,063	945	54
4th Support BN (Aviation)			
Quantities	134	85	37
Makes/Models	26	19	27
Volume (ft^3)	101	64	37
Weight (lbs)	2,307	1,496	35
2d/3d Forward Support			
Quantities	49	33	33
Makes/Models	19	11	47
Volume (ft^3)	35	29	17
Weight (lbs)	925	597	35

(U) In addition, there was an on-going transit case application effort. Cases of various sizes and constructions were brought to protect various pieces of TMDE and were to be rotated at several battalions for their use. The battalions were given responsibility for appraising the cases. The results would then be evaluated for possible future procurement for Army-wide use.

(U) A special sample data collection (SDC) effort began in FY85 for TMDE modernization in the 9ID (MTZ). The objective was to obtain data to analyze payoffs for the Army division in terms of reduced logistics requirements of TMDE. The SDC was being conducted in the 1st and 2d Forward Support Battalions (FSB) with the DISCOM Group of 9ID. The 1st FSB was designated as the "control" FSB and would retain their TMDE for an SDC program lasting from June 1985 to June 1986. The 2d FSB was designated "upgraded FSB" and would make equipment changes to the MTOE, the SDC to occur for a one-year period beginning in the second quarter of FY86. Selected equipment would be modernized and would replace older TMDE. Although some TMDE would remain the same in both FSB's, the value of this equipment to the mission of the division would also be evaluated. The "control" FSB would collect SDC for all assigned TMDE on the current MTOE. The "upgraded" FSB would collect data on the selected

TMDE and the TMDE that was not replaced by upgraded TMDE. Replaced TMDE would be purged from shop operation, and would not be accessible by shop repairmen.

(U) Test Program Sets (TPS) Policy and Procedures. The Army Test Program Set (TPS) Policy and Procedures Manual had been developed and issued by the Product Manger for Test Program Sets, Fort Monmouth, New Jersey. The overview of these procedures was initially released for comments to organizations within AMC, as well as to interested industry observers. In FY86 a toll free number was to be established to provide a point of contact for each element of the manual and general TPS concerns. A telephone number for access to a TPS Information System (TPSIS) would also be made available. The TPSIS would provide a bulletin board, an automated means for collecting, storing, and disseminating comprehensive data to commands as well as reporting TPS discrepancies.

(U) In addition, an education program to assist interested individuals having a need to know about the TPS Policy and Procedures Manual and TPS management would be available. The education program would provide a two-day program of instruction. The first day of instruction was planned for TPS awareness. The second would be available for management fundamentals. The PM Office was also evaluating Joint Logistics Commanders (JLC) courses for possible funding support.

CHAPTER VI

US ARMY SECURITY ASSISTANCE CENTER (U)

Introduction (U)

(U) The US Army Security Assistance Center (USASAC) pursued a mission of supporting US foreign policy as Executive Agent for management of Army Security Assistance (SA) programs, providing friendly countries and allies an increased capacity to defend themselves.

(U) During FY85, USASAC accomplished its mission with a workforce of 610 civilian and 17 military personnel. As a major subordinate command of AMC, USASAC managed a $26.7 billion program with 6,323 Foreign Military Sales (FMS) cases.[1]

(U) The DOD, having responsibility for establishing military requirements and for implementing programs of defense materiel, services, and training, operated through the Defense Security Assistance Agency in furnishing plans, policy, and program information to USASAC, which in turn was dependent on Army commodity commands, TRADOC, and others to prepare and implement specific programs or "cases." Overall control was given by statute to the Secretary of State.[2]

(U) The USASAC Commander, Major General E. C. O'Connor, reemphasized the commitment to quality support to SA customers and initiated actions to strengthen teamwork between USASAC and the rest of AMC, DOD and State Department security assistance personnel worldwide. The goal of providing improved customer service and responsiveness was further advanced through complete implementation of the Army Centralized Case Management System (ACCMS). Central Case Management totally integrated financial and logistical processes through designation of USASAC as the single point of contact within Army for managing FMS cases. Reorganization of the USASAC Comptroller Directorate under the Resource Management structure further enhanced USASAC SA support capabilities.[3]

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[1] US Army Security Assistance Center (USASAC), FY85 AHR submission, 10 Feb 87 supplement.
[2] USASAC PAM 12-1, p. 7.
[3] USASAC, FY85 AHR submission.

Central Case Manager (U)

(U) By supervising the International Logistics Directorates at AMC's MSCs, developing better audit capabilities, and dealing with other federal agencies and foreign governments and organizations, USASAC was fulfilling the role envisioned by the House Armed Services Committee (HASC) when it directed during FY83 appropriations hearings that the military Services gain a better handle on Foreign Military Sales (FMS), the mainstay of US security assistance, by developing a central case manager.[4]

(U) USASAC had been working toward improved management systems and enhanced automation capacity before receiving the HASC directive on centralized case management (CCM). FY84 saw a merging of efforts bent toward satisfying not only the congressional critics but also those foreign states and organizations to which military sales might be made.[5] Under the AMC Commander and Major General O'Connor, USASAC CG/Director, the effort was continued in FY85 to realize the Army Central Case Management System (ACCMS).

(U) An improved FY85 performance in clearing up residual problems so that long-open cases might be closed was done less through improved policies and procedures than through "management attention and brute force" according to a January 1986 briefing.[6] This assessment probably undervalued the role played by improved information available to management. In April the improved information capacity enabled institution of the Intensive Management Report, which brought management attention to specific problem cases where managerial "brute force" might be applied.[7] But the Center looked for further improvements in case closure performance through improved policies and procedures. This was not confined, of course, simply to case closings, but applied to case handling across the board, from pricing, to logistic assessment, to shipping, to accountability, to response time generally.[8]

(U) The campaign to establish itself as the CCM for Army led also to reorganization in August 1985 along broad geographical lines, giving extensive case handling authority to teams that would have a

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[4] FY83 AHR, p. 283; USASAC, FY85 AHR submission; p. 1; Duane Murtomaki, PM SA[3], Interview, 2 Sep 86.
[5] See generally, FY84 AHR, Chapter VII.
[6] AMC Commanders Conference, Winter, 1986.
[7] USASAC, FY85 AHR submission, p. 6.
[8] Ibid; See also Interview, MG E.C. O'Connor, CG USASAC, 13 Jun 86.

big picture of security assistance activities in their region and which would have an internal goal-oriented and morale-enhancing flexibility.[9]

(U) Reorganization on Wheel Concept. The added responsibilities undertaken with CCM pushed along reorganization within USASAC. In August 1985, staff elements were realigned to provide for three CCM directorates corresponding with the regional directorates under the Deputy for Plans and Management in Alexandria. The three CCM directorates were each composed of two divisions; a varying number of CCM Cells comprised each division. The key to the reorganization was the arrangement of all case management functions around the central case manager heading each cell: essentially, a wheel concept of management. Work was distributed to the cells by country following assessment of the workload each country entailed. Depending on the work volume, a cell would have more or fewer people assigned to it.[10]

(U) Advantages attributed to the system were that it was flexible in handling varying business workload; it built morale by permitting the team to see the whole FMS picture with respect to the country or countries it was handling; and cross-training of personnel was fostered as performance indices were of the team. As an additional consideration, it brought Army into compliance with the HASC directive to designate central case managers to manage all active FMS cases.[11]

(U) The wheel concept was being studied for implementation at USASAC Alexandria in FY85, and at the end of the year the Alexandria organization was being restructured along similar lines.[12]

(U) Comptroller to Resource Manager. A reorganization of the financial management functions overseen by the USASAC Comptroller added responsibilities effective 1 July 1985 for force development and manpower management, thereafter to be integrated with the management of dollars. Organizationally, the comptroller was designated as Director for Resource Management and given deputies for financial operations and for resources and financial plans. The change also brought activities external to USASAC but impacting force management and financial policies/plans within the responsibility of

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9 US Army Security Assistance Center, FY85 AHR submission, p. 9-10. Briefing, Winter Commanders Conference.

10 Ibid.

11 Briefing, Winter Commanders Conference, HQ AMC.

12 Ibid.

the Resource Manager. Administrative officers in New Cumberland and Alexandria were to continue provision of administrative support, except in the force management area.[13]

(U) USASAC continued processing recommendations relating to recoupment of nonrecurring costs for major and non-major defense equipment (MDE and Non-MDE) during FY85 to ensure the recoupment rates ensured a profitless but complete recovery of a pro rata share of US development costs.[14] Changes relating to the method of Non-MDE computation of charges, including a lowered equipment value threshold for recoupment, were instituted in FY85. Also in FY85, USASAC backed an initiative to have the US Army Audit Agency review Army FMS pricing policies, procedures, systems, and manpower to ensure that prices reflected US costs accurately.

(U) The Center operated on an FMS administrative fee budget of $100.2 million, collected as a percentage of the materiel it supplied, achieving a 99.9 percent obligation rate through yearend reprogramming that saw all valid requirements funded and executed. The FY85 budget represented a better than 9 percent growth over the FY84 budget of $91.8 million.[15]

(U) Security Assistance Automation, Army. A central automated support for Army's security assistance mission was in development in FY85 as the Security Assistance Automation, Army (SA^3) system. Prior to SA^3, many local and unique automated systems kept track of the flow of data associated with the mission. The MSCs relied upon the CCSS [Commodity Command Standard System] for its logistics data, while the USASAC operations center in New Cumberland, Pennsylvania, developed the Centralized Integrated System International Logistics (CIS-IL) to handle information at the central case level. The systems could not communicate well with each other and lacked the ability to assemble data for examination at the country level or higher. Much of the data was maintained by hand. These and other shortcomings generated the SA^3 program, which was given a HQDA PM charter in March 1983.[16]

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[13] Ibid.

[14] Equipment reviewed included the AN/USQ-70, Position and Azimuth Determining System; M1/M1E Tank; M60 tank machine hull; M261 multi-purpose sub-munition warhead for the Hydra 70 weapons system; Low Altitude Surveillance Radar (LASR) derivative of the AN/TPQ-36 radar; M981 Fire Support Team Vehicle (FISTV) system, and High Mobility Multi-Purpose Vehicle (HMMPV).

[15] US Army Security Assistance Center, FY85 AHR submission, p. 10.

[16] USASAC, FY85 AHR submission, p. 1; See FY84 AHR for additional information.

(U) The objectives of the SA^3 system were to provide integrated and synchronized data to functional users at all levels, to provide superior inquiry capabilities through expanded communication channels, and to provide executive level decision support data where and when it was needed. Additionally, within the office environment, automated data coupled with the emerging technologies of micro processors, electronic mail and other system tools would provide the major productivity enhancement. The system was being developed in phases.[17]

(U) In FY85, following better than a year of prototype operation, the Phase I capability was installed at the operations center and the MSCs. It represented the baseline component of what was being designed as a modular system, one that would facilitate future changes and enhancements and dovetail with remaining phases of the the system. It incorporated the major components of CCM at USASAC and the MSCs into standard compatible data bases, including such information as requisition, billing, procurement, supply, and delivery data by both case and line levels. It would also give current and synchronized management information with specially tailored inquiries.[18]

(U) The requisition level data file, MRHS (Materiel Requisition History File), expanded to the SA^3 format on 29 June, giving country program managers and central case managers data needed for total case management. The expanded file provided a complete audit trail of supply status as well as new sectors for original requisition data, materiel release orders, back order validation, requisition modifications, suspended transactions, availability/transportation, and follow-ups on bills.

(U) Phase II was in prototype processing at the Automated Logistics Management Systems Agency (ALMSA) in Rock Island, Illinois, with proliferation expected in early FY86. With it, DD Form 1513, the Letter of Offer and Acceptance (LOA), would be supported with standard logic permitting its automated preparation and transmittal to organizational elements for coordinated integration of all required data elements, including pricing and availability.[19]

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[17] US Army Security Assistance Center, FY85 AMR submission, p. 1.

[18] Ibid.

[19] Ibid, p. 2. An indication of the future capability that working in a realtime access mode would have on preparation of LOAs came on 14 Mar 85, when USASAC conducted an exercise to determine the feasibility of developing an LOA within three working days in such an environment.

(U) Phase III was in programming in FY85, to include a variety of capabilities, including standard reports of discrepancy (ROD) processes, major item data processes, supportability statements, and case closeout procedures. Follow-on phases being planned included data interchange with other automated systems, such as the DOD financial files at Fort Benjamin Harrison, Indiana, and the Security Assistance Accounting Center (SAAC) files in Denver.[20]

(U) The Office of the Secretary of Defense (OSD) required direct participation by the Military Departments (MILDEPS) in developing interface requirements with SAAC. Nine concept papers describing specific interfaces were developed by the Interface Design Team and forwarded to the OSD for approval. OSD gave approval to the MILDEPS to proceed with the system design and development phase of the FMS Accounting and Billing System (FABS)/FMS Integrated Control System (FICS). Initial implementation was set for 1 October 1986.[21]

(U) Facsimile Network. In March 1985, USASAC established a dedicated facsimile network, the Security Assistance Dedicated Facsimile Network (SADFAN), to expedite information flow and accelerate case preparation time. The 29 machines employed were high-speed digital equipment able, however, to communicate with older three and six-minute machines. The 16 locations initially serviced were to be expanded to cover security assistance offices (SAO) in 29 countries, additional Army activities in the continental United States, and other federal agencies with security assistance missions. During FY85, commercially available communications protection devices were being added to protect the sensitive information transmitted, while further enhancements were planned that would permit transmittal of classified information. SADFAN was used in communications with foreign customers and commercial enterprises as well as within the SA community.[22]

(U) Freight Forwarder Tracking System. The Center implemented a system for close tracking of materiel in transport from source of supply or repair to the country of destination or from the customer to the source of repair. The capability of the system, known as the Freight Forwarder Tracking System (FFTS), was intended for the benefit of the US Army case managers and those customers desiring it. Of 28 countries offered the system in FY85, Singapore, Thailand, and Egypt gave positive responses, another five indicated high interest,

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[20] Ibid.
[21] Ibid.
[22] Ibid.

and only three gave firm rejections.[23] Germany, the Saudi Arabian National Guard, and NATO Maintenance and Supply Activity already possessed such systems. The system became operational 7 August 1985, although problems with obtaining input were still being addressed.[24]

(U) LOR/LOA. The exercise conducted by USASAC to test the feasibility of expediting preparation of an LOA to three working days by working in a realtime environment was successfully concluded on 14 March 1985. The Plexus P/60 microcomputer at New Cumberland served as the central repository for data transmitted electronically between the MSCs and USASAC in Alexandria and NCAD. Voice grade telephone lines used for communication caused difficulty in communication for all of the participants, however, and a decision was made to establish dedicated lines.[25]

(U) Security Affairs Support Directorate for Information Management (SASDIM) had responsibility of maintaining the microcomputer and related equipment to insure communication interface for all participants as well as to provide technical assistance to terminal operators during the exercise. DMIS personnel expended some 200 manhours insuring that all requirements were met, including time spent in LOA meetings, preparing briefing materiel, researching software and hardware compatibility, installing dial-in modems on the Plexus P/60, preparing training material, training personnel in system access, UNIX operation, and text editors, preparing the microcomputer for the exercise, assisting MSCs in establishing telephone links and interacting via terminals, writing UNIX shell programs to aid monitoring of exercise progress, and preparing an after-action, lessons learned report.[26]

(U) MILSTRIP/MILSTAMP/MAPAD. The standard 8-hour orientation in MILSTRIP/MILSTAMP/MAPAD (Military Standard Requisition and Issue Procedure, Military Standard Transportation and Movement Procedures, and Military Assistance Program Address Directory) was given to 535 personnel at various CONUS and overseas locations in 32 separate sessions. AMC depots, Navy Transportation School - Oakland, freight forwarders, foreign embassies and commands, and USASAC received the lectures, blackboard demonstrations, slides, quizzes, and classroom discussion on these procedural systems for control and direction of materiel.[27]

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[23] Countries inidicating high interest were the United Kingdom, Taiwan, Norway, Turkey, and Saudi Arabia. The Philippines, Kuwait, and Jordan gave negative responses.

[24] Ibid.

[25] Ibid.

[26] Ibid.

[27] Ibid, p. 3.

Country Programs (U)

(U) Financial Reviews. Country reviews to determine the validity of payment schedules and adjust case values as appropriate were completed during FY85 for Italy, Saudi Arabia, United Kingdom, Jordan, Morocco, Philippines, Egypt, Greece, and Japan. Potential savings to these countries, surfaced by the reviews, totalled approximately $59 million.[28]

(U) Emergency/Expedite Impact Shipments. Impact shipments in FY85 continued for El Salvador, spanning the fiscal year, while the high-priority shipments also included materiel going to Honduras, Lebanon, Somalia, Zaire, Chad, Tunisia, Pakistan, and Kenya. The impact shipments were described as being "the result of political/military decisions made at the highest levels of the US Government" requiring "the US Army to deliver equipment to foreign nations within specified expedited time frames." The actions required to ensure meeting such urgent delivery dates involved coordination throughout DOD and with AMC and non-AMC inventory managers, shipping depots, transportation activities, and the like, as well as immediate responses received after regular hours of operation.[29]

(U) Egypt Army Armament Authority. One of the more complex assistance projects undertaken in recent years was a 3-year effort to provide the Egypt Armament Authority with a computer facility built to US standards, hardware, software, and training pitched toward data processing, cataloging and FMS requisition tracking. Phase I of the project began in July 1985 and included establishment of the facility in Cairo and technical assistance provided in the continental United States. Phase II was to take place at the Cairo center and was to consist of technical assistance to the Egyptian programmer/analysts and systems programmer. A project manager and deputy project manager were assigned to perform the extraordinary actions required in the management of the case.[30]

The various components of the case were:

* Computer hardware and operating software--procurement, delivery, installation, and maintenance;

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[28] Ibid. The country reviews are mandated by the Defense Security Assistance Agency (DSAA) which has identified Portugal, Indonesia, Tunisia, and Taiwan for country reviews in FY86.

[29] Ibid, p. 3.

[30] USASAC, FY85 AHR submission. Following country programs were reported from unclassified portions of the submission as well.

* Facility--design and construction of preengineered metal building housing the Egyptian Armament Authority Computer Center;

* Furnishings--procurement, delivery, and installation of furnishings, to include ADP accessory equipment;

* Supplies--procurement, delivery, and replenishment of office and ADP supplies for center;

* Training--formal and on-the-job training for up to 31 students, lasting 5 weeks, for functional cataloging fundamentals; further contractor-provided ADP training, and training of four students to qualify them as operating systems programmers;

* Technical assistance--technical assistance for up to 10 application programmer/analysts at USASAC for up to 4 months following completion of formal training, and on-site technical assistance for 1 year by one contractor technical representative specializing in operating systems software and by one DOD technical representative specializing in application systems design and programming; and

* Case management--project manager and deputy project manager guidance to perform actions required to manage case.

(U) Denmark - Hawk. Leases were initiated to cover two batteries of Improved Hawk missile systems as continuation of a 1981 agreement on prepositioning for US Marines amphibious brigades. The first delivery under one of the leases (LAB) was delivered in August 1985 with a total value of $13,380,027. The other, lease LAC, was scheduled for delivery in March 1986; its value totalled $11,020,378.[31]

(U) France - MLRS. USASAC implemented FMS Case FR-B-UXY for one Multiple Launch Rocket System (MLRS) Self-Propelled Launcher/Loader (SPLL) on 28 December 1984. Delivery of the SPLL was to occur in December 1985.

(U) Germany. A Memorandum of Understanding (MOU) signed 7 September 1985 with the Federal Republic of Germany (FRG) promised delivery of the mission equipment package (MEP) for the Advanced

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[31] Ibid.

Attack Helicopter (AAH). Two FMS cases were offered the FRG, covering developmental work, reliability efforts, configuration management, and transfer of data for the MEP. Acceptance of these cases, exceeding $18.5 million in toto, was expected during November 1985. In addition, FMS Case GY-B-WIA, relating to the US/FRG Agreement on Cooperative Measures for enhancing Air Defense for Central Europe, was implemented on 8 February 1985. This involved $1,155,568,295 for the Patriot missile system.

(U) Israel. On 9 October 1985, the government of Israel signed an MOU with the United States for cooperative research and development to improve the M109 howitzers in the inventories of both countries. The agreement was for a 4-year effort involving expenditure of an estimated $202 million. Israel signed a Letter of Offer for $28 million, representing their share of the effort.

(U) North Atlantic Treaty Organization. Weapon systems partnership agreements for the Patriot missile and for the Multiple Launch Rocket System (MLRS) were concluded on 16 August and 26 August respectively, to establish common logistics support under the NATO Maintenance and Supply Agency (NAMSA) in Luxembourg. The agreements were signed by Germany, Netherlands, NAMSA, and the United States for the Patriot, and Germany, Italy, France, United Kingdom, NAMSA, and the United States for MLRS. The agreements sought a common MLRS/Patriot missile repair facility and depot maintenance capability by 1989.

(U) Netherlands. The United States and the Netherlands reached agreement in principle on Cooperative Measures for Enhancing Air Defense for Central Europe 4 September 1985, covering the Patriot missile system. By the agreement, the United States would identify $70 million in Netherlands' defense products and services for acquisition by the United States and the Netherlands would provide or fund manpower and services over a 10-year period to enable a reduction of Patriot nonrecurring cost recoupment charges amounting to $33.3 million. Also, the Netherlands FMS Case for the MLRS SPLL (see France, above) was initiated with a value of $4,661,389, as was FMS Case NE-B-VQU for 820 improved Tube-Launched, Optically-Tracked, Wire-Guided (TOW 2) missiles at $31,167,389. Acceptance for both was anticipated by 31 December 1985.

(U) Norway. Two cases for the TOW 2 missile system were initiated and presented to the government of Norway. The missiles were to come from Special Defense Acquisition Fund (SDAF) assets, number 1,350 in all, and total $13,762,183 in value. The 98 TOW 2 launchers were valued at $8,490,917. The schedule for both foresaw signing in early November 1985.

(U) Spain. In FY85, 37 FMS cases were released to Spain having a combined value of $41.3 million. Overhaul and product improvement of Spain's Improved-Hawk missiles was implemented in June 1985. These two cases amounted to a value of $25 million between them.

(U) Turkey. A major artillery upgrade briefing was held in June 1985 at the Defense Industrial Cooperation Executive Committee Meeting. Part of the United States "best efforts support" to Turkey under the Defense and Economic Cooperation Agreement, the artillery initiative bore fruit with agreement to deliver 16 M110A2 howitzers by January 1986. Other ongoing projects managed by Army under DECA/DIC included a fifth and final procurement of tank conversion subkits and a third procurement of 15 UH-1H helicopters. Altogether, the Turkish Army's FMS program climbed to over $1.2 billion.

Saudi Arabian National Guard Modernization Program (U)

(U) The 12-year-old program of modernizing the Saudi Arabian National Guard (SANG), the full-time active duty forces commanded in FY85 by HRH Crown Prince Abdullah bin Abdul Aziz and the 6-year-old program of modernizing SANG's medical services made the Office of Project Manager, SANG Modernization, unique within USASAC. OPM SANG was totally funded by the Saudi government through FMS cases, yet the project involved not so much of weapons system development and acquisition as of large dollar contract administration, FMS case management, and advice and assistance to SANG.

(U) In FY85, the project was geared to maintaining the ready status of a first brigade with four combined arms battalions while bringing along units of a second brigade, with the objective of having two modernized brigades, each with four combined arms battalions (CAB), an artillery battery, a Vulcan air defense platoon, and an engineer platoon. Also, self-sufficiency was being developed for SANG in the areas of training and logistics support through establishment of of a general support logistics base, a military and technical school system, brigade headquarters, signal company, and a direct support logistics battalion. The modernization of the medical services included development and operation of a 500-bed tertiary care facility as well as field medical care.

(U) Office of the Project Manager. On 6 March 1985, a new charter was issued for the PM SANG from the Secretary of the Army.[32]

(U) A new table of distribution and allowances prepared within OPM SANG to reflect internal realignments was submitted to HQ AMC in March 1985 and approved the same month. The changes abolished a

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[32] Ibid, p. 13.

supervisory layer in the resource management division, restructured the medical management directorate (MMD) to reflect a shift in the medical program focus toward greater concern for SANG field medical services capabilities (the field medical program and the King Fahad Hospital becoming separate branches), and formation of a plans and programs branch to assure strategic planning and consideration of broad program issues outside the scope of the functional divisions.[33]

(U) Manpower requirements declined by one to 188 with the TDA changes, although manpower authorizations were unchanged at the outset of the year at 138, but declined to 133 in the second quarter and for the remainder of the year. The actual assigned strength, with the overhires, was as follows:

	Officer	Enlisted	Civilian	TCN*	Total
1st Qtr	35	5	97	32	169
2d Qtr	38	5	93	29	165
3rd Qtr	31	5	89	30	155
4th Qtr	34	5	75	31	145

The authorized strength was:

	Officer	Enlisted	Civilian	TCN*	Total
1st Qtr	41	5	72	20	138
2d Qtr	41	5	67	20	133
3rd Qtr	41	5	67	20	133
4th Qtr	41	5	67	20	133

(* TCN = third country national)

(U) Finance and accounting support was given from the outside. This came from the Corps of Engineers Middle East Division until 1 June 1985. Afterwards, the US Military Training Mission (USMTM) in Dhahran was able to provide support, including in-country voucher processing.[34]

(U) A total of 16 subcases were closed during the year, involving final delivered values totalling $2,505,092 in the first quarter, $7,347,839 in the second, $315,503,318 in the third, and $9,425,084 in the third. Closure of these subcases resulted in funds being transferred back to the holding account for the master case amounting to over $36,869,000. Major reprogramming of funds for the FMS modernization subcases and a revised deposit schedule gained

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[33] Ibid, pp. 10, 13.
[34] Ibid, p. 17.

approval from the Defense Security Assistance Agency (DSAA) and the Security Affairs Accounting Center (SAAC). As a result, OPM SANG had its mission objectives funded through December 1987 with no further funding required from SANG. For the medical program, SANG made a $63.6 million deposit on 6 March 1985, which was reported as an advance payment on the final deposit to the medical program, due in July 1987.[35]

(U) Headquarters Saudi Arabian National Guard. In the first quarter, FY85, Headquarters, SANG set up a field training exercise (FTX) planning cell to plan, coordinate, and execute the annual Spring FTX. Assuming the bulk of the responsibility from the outset, the planning cell used OPM resources only for "over-the-shoulder" training and also significantly reduced reliance on the contractor. The results of the preparation, carried out through functional area planning cells at SANG's underground command center were rated an overwhelming success when carried out in the second quarter.[36] The after action report was completed and sent to HQ SANG on 22 April 1985. It was given a great amount of time by HQ SANG for analysis of the identified problem areas. It was in time to impact planning for the new training year, including the 1986 Spring FTX that began in the third quarter and was well advanced by the fourth. Specifically, the Spring 1986 FTX exercise area was selected and objectives of the exercise were in development by the end of the year.[37]

(U) Groundwork laid earlier began to pay off in the second quarter of FY85 in personnel management and administration, an area that OPM rated as perhaps the most troublesome in its modernization efforts.[38] Significant improvements were made in assigning/reassigning personnel in accordance with authorization documents, although the lack of current personnel information, data being 3 to 4 months old, was a major problem.[39] Also, SANG sent selected officers to adjutant general basic and advanced courses, the first CONUS training of SANG officers in personnel management and administration.[40]

(U) Effective counterpart relationships with officers from the SANG directorates of training and personnel marked the year. The new OPM personnel staff officer was able to establish an effective liaison after his arrival in the fourth quarter, and closer counterpart ties were looked for in both the officer personnel and

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35 Ibid, pp. 10, 13, 17, and 21.
36 Ibid, pp. 6, 10.
37 Ibid, pp. 13, 18.
38 FY84 AHR, Chapter VI.
39 Ibid, p. 10.
40 Ibid.

personnel divisions to further the effort to establish an effective personnel management system for SANG. Arrival of the new OPM personnel staff officer in the fourth quarter facilitated the modernization efforts for personnel and training.[41]

(U) At the end of the year, General Mohammed bin Abdullah al Amr, Chief of the Military Organization (CMO), had under review for follow-on action with both OPM SANG and the British advisory group, an organization and rank structure encompassing staff and command functions within SANG that he had requested of OPM, SANG and which was briefed to him on 25 September 1985.[42]

(U) In the training arena, PM SANG prepared a draft training policy directive and presented it for consideration by SANG. Modeled after AR 350-1, it sought to link SANG training efforts vertically, giving HQ SANG command and control of training policy. Prior to this third quarter effort, SANG training efforts were focused horizontally at brigade and lower level units with little communication or control from one layer to the next.[43] Concurrently with this effort, the contractor was tasked to formalize supporting "how to" 25-series training manuals for subordinate command training managers. Arabic versions of Field Manuals 25-1 and 25-2 were drafted and submitted to OPM for review and approval.[44]

(U) HQ SANG officers from the Directorate of Training, Collective Training Branch, and OPM officers by the end of the year had proceeded through the second part of a developmental study for a range complex and maneuver training area near Al Hasa in the Eastern Province. The range was to support units from the 2d brigade stationed at Al Hasa as well as unmodernized units stationed in the Eastern Province.[45]

(U) Meanwhile, HQ SANG established an accelerated training schedule for the new units of the 2d Brigade, now given the official designation of the King Abdul Aziz Brigade. The school and collective training of the 7th Combined Arms Battalion (CAB) was accelerated to ensure graduation by March 1986. Individual basic and advanced skill training for the 8th CAB and the 7th Field Artillery Battery (FAB) were accelerated to ensure a sufficiency of students at the Military and Technical Schools (M&TS).[46] Scheduled graduation dates for these two units were kept as is.

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[41] Ibid, pp. 17, 18.
[42] Ibid, p. 18.
[43] Ibid, p. 14.
[44] Ibid.
[45] Ibid, p. 17.
[46] Ibid, p. 18.

(U) In the fourth quarter, HQ SANG monitored the deployment, participation and redeployment of four CABs and one artillery battalion from the 1st Brigade to the Mecca/Medina area to support internal security operations during August. All units deployed without crew-served weapons and armored vehicles and returned to Riyadh without incident.[47]

(U) New Unit Training - 2d Brigade HQ. Following an intensive training period in the field, the 2d Brigade HQ completed its new unit training. Formed 1 May 1984, the new unit training began with the new fiscal year after school training of its personnel. A series of command post exercises (CPX) and FTXs culminated with successful completion of the Saudi Arabian National Guard Training and Evaluation Program (SANGTEP), and on 23 December 1984 the SANG CMO gave the brigade headquarters command and control of all 2d Brigade elements, 8 months from the date of its formation. Equipment shortages were a problem for the brigade headquarters, but these were primarily SANG-furnished items, and the 2d Brigade HQ was formally graduated following the Spring FTX.[48]

(U) 6th CAB. The 2d Brigade Headquarters and Headquarters Company (HHC) drew support from the 6th CAB through new unit training, first with a CPX cell and then with the entire battalion in a 4-week FTX, culminating with the the 2d Brigade opposing forces SANGTEP in November 1984. The 6th CAB moved on to equipment maintenance and preparation for individual and crew-served weapons firing in January 1985.[49]

(U) 5th Artillery Battery. The 5th Artillery Battery conducted two live fire exercises during the first quarter, part of training preparing the battery for its 27-30 January SANGTEP. Collective training for Headquarters and Headquarters Battalion (HHB) and Service Battery began 1 February 1985.[50] The battery was fully trained and qualified on the M198 howitzer (155mm) and passed the M198 new equipment SANGTEP in February. Participating in the Spring FTX, it engaged in a live fire demonstration for HRH Crown Prince Abdullah. Its command and control proved weak during the Spring FTX, however, and in the third quarter, with a new commander, it completed three reconnaissance/selection/occupation of positions (RSOP) exercises.[51] Together with other elements, it successfully completed and OPM SANG SANGTEP evaluation the following August.

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47 Ibid, p. 17.
48 Ibid, p. 6.
49 Ibid, p. 6.
50 Ibid, p. 6.
51 Ibid, pp. 10, 14.

(U) 2d Artillery Battalion HHB and Service Battery. The 2d Artillery Battalion HHB and Service Battery commenced collective training 1 February 1985, which it continued until completing the OPM SANG SANGTEP in August 1985 with the 5th Artillery Battery. Highlights included 3-week-long CPXs in the third quarter, working on staff training exercises, command and control operations, maintenance, and ammunition resupply procedures. Bad weather and poor preparation gave both batteries problems, but significant improvements were marked by the second week.[52]

(U) 7th CAB. In the 7th CAB, the HHC and 1st Rifle Company began new unit training 4 May 1985, each with 109 percent of personnel. Equipment issue was a problem. Less than half of the SANG-procured equipment was on hand when training began, and the unit commander and property book officer made some headway in active pursuit of filling shortages. Training progressed from squad level organization and technical training through section and platoon levels to company-level training, the battalion staff performing superbly.[53]

Graduated Units - 1st Brigade. Personnel, training, and equipment problems troubled the 1st Brigade through the year. The Brigade Headquarters postponed field training programs from the first into the second quarter of the year, making three full quarters with no field training. When the headquarters finally took to the field in a 6-9 January FTX, the outing could not serve as the unit's SANGTEP due to a generally unsatisfactory overall performance.[54]

(U) The four 1st Brigade CABs trained in the first and second quarters on individual and crew-served weapons qualification, mechanized infantry squad proficiency course (MISPC), platoon level offense and defense training, and maintenance. Training of low-density military occupational specialties (MOS)--particularly supply, maintenance, and medical personnel--was problematic.[55]

(U) The 1st Artillery Battalion did conduct field live fire exercises in the first quarter for all four of its batteries. As with the CABs, its preparations were geared toward effective performance at the Spring FTX.

(U) For the 1st Engineer Company, the first quarter was marked by its successful clearance of four ranges of unexploded ordnance. Its problem areas were low-density construction MOS training and lack

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[52] Ibid, pp. 10, 14, 18.
[53] Ibid, pp. 14, 18.
[54] Ibid, p. 7, 10.
[55] Ibid, pp. 7, 10.

of repair parts, although most table of organization and equipment (TOE) shortages were filled in the quarter. The lack of repair parts, however, meant a hesitancy on the part of SANG to commit the unit to earth-moving projects.[56]

(U) The 1st Logistics Support Battalion also experienced problems in maintaining repair parts in inventory. The authorized stockage list (ASL) was not routinely replenished through the established procurement system. Attempts to correct these problems included such second quarter efforts as reducing its ASL from 8,763 lines to 7,000 lines to make the technical supply operations more manageable, and inventory of prescribed load list (PLL) stockages. The latter disclosed such problems as zero balances on 543 of 623 PLL lines for the 1st LSB Maintenance Company. Due to exchange of Steyr trucks for Dodge W600 trucks that had been occurring over the prior year, the battalion turned in 1,000 lines of W600 repair parts and received an initial issue of Steyr repair parts for its ASL and unit PLLs.[57]

(U) Spring FTX. Performance during the 20 February to 12 March Spring FTX was judged satisfactory overall for all units. The 1st Brigade Headquarters made significant improvement over its January FTX. The 2d CAB compiled the best unit record during the particularly challenging spring exercise and was awarded the Prince Abdullah Cup. The 1st Artillery Battalion included a combined operational readiness test (CORT), a 1,500-kilometer road march, a security mission, a 5-day tactical training exercise, and a live-fire exercise during the Spring FTX, compiling particularly commendable results in the areas of fire support, convoy movement, tactical proficiency, communications, and staff planning, although proving weak in areas of basic soldier skills, intelligence operations, and operator maintenance.[58]

(U) The 1st Engineer Company attributed its successful completion of a SANGTEP, a CORT, and the Spring FTX in the second quarter to a qualified complement of noncommissioned officer personnel.[59]

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[56] Ibid, p. 7.
[57] Ibid, pp. 7-11.
[58] Ibid, p. 10.
[59] Ibid.

(U) The 1st LSB deployed, participated in, and returned from the Spring FTX with only minor problems. Its preparation for and support it furnished during the exercise was superior, with improvement over the past year noted in the areas of fuel, electrical, and communications electronics (COMMEL) support.[60]

(U) Third Quarter Activity. Elements of the 1st Brigade conducted its most successful CPX at the close of the third quarter, employing a counter-terrorist scenario. Planning, participation, and execution by the brigade and CAB staffs were excellent. However, despite coordination with HQ SANG, the headquarters did not provide participants to the exercise, detracting somewhat from the overall benefit.[61]

(U) The four CABs each received 15 new lieutenants during the third quarter but still remained below authorized strength, although operationally functional. The CABs conducted their own MOS training and testing, primarily during the month of Ramadan. Although the efforts were successful, low-density MOS training was again not adequately met. Increased battalion command emphasis on maintenance improved problems in this area somewhat, although brigade emphasis was still lacking. Aging V-150s placed a strain on maintenance support, but no critical equipment shortages existed during the quarter.[62]

(U) Although cancelled in the fourth quarter, the task of constructing a temporary sports complex fell to the 1st Engineer Company in the third quarter. Assigned by the CMO, the project was to provide both individual skills and construction management training and was to be the first collective training the unit was to receive in construction. Planning was undertaken under the close monitoring of the engineering support officer, who believed that further construction projects should be undertaken by the company on successful completion of the project. Anticipation of heavy engineering equipment breakdown prior to field training duty prompted cancellation of the project by the CMO in the fourth quarter.[63]

(U) The 1st Artillery Battalion conducted individual and crew-served weapons familiarization classes in the third quarter. In June, it held its semi-annual live fire exercises at the range at Khashm Al An (KAA). The brigade fire support officer instructed 16

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[60] Ibid, p. 11.
[61] Ibid, p. 14.
[62] Ibid.
[63] Ibid, pp. 15, 19.

recently assigned second lieutenants in forward observer procedures during Ramadan. Generally, limited individual section training was held in the quarter, the impact of Ramadan.[64]

(U) Fourth Quarter Activities. In the 1st Brigade, logistics problems made effective maintenance programs nearly impossible in the fourth quarter. Repair parts, and trained mechanics and supply personnel were scarce. The Vulcan systems were particularly affected. Property accountability also became a concern. The brigade performed well operationally, however, and training was not severely impacted. Of particular importance, SANG again participated in the Hadj security. Five battalions, plus augmentation, moved to the Mecca/Medina area with greater efficiency in both movement and operations than in previous years. Clear-cut divisions in communications and logistics responsibilities established by the staff contributed to the improvement. SANG personnel were also assigned to a joint command and control staff for the mission. The unit training readiness suffered somewhat due to the operations, but there was no difficulty in making up the lost training time. What attention was paid to training concentrated on riot control for the CABs.[65]

(U) The 1st LSB was not required to provide logistics support to the 1st Brigade units during the Hadj mission. Their training in the fourth quarter, besides riot control, included command and staff training and preparation for a brigade-level CPX.[66]

(U) 2d Brigade. The only graduated 2d Brigade element at the beginning of the year, the 2d LSB provided effective support to 2d Brigade elements throughout the year. The 2d Brigade Headquarters received its help for numerous tactical CPXs, FTXs, and logistical exercises (LOGEX) through the first quarter, improving its own coordination and support as the 2d Brigade itself moved toward its own successful graduation.[67]

(U) Selected to test the operational effectiveness of a new approved-for-test combat service support (CSS) doctrine that divides the battalion into forward and rear elements, the 2d LSB received detailed training in the doctrine and applied it in a brigade-level logistical exercise in January 1985. During the Spring FTX the doctrine was again applied with good results as over 300 job orders were completed during the FTX and only six vehicles required evacuation beyond the LSB level.[68]

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[64] Ibid, p. 15.
[65] Ibid, p. 18.
[66] Ibid.
[67] Ibid, p. 7.
[68] Ibid, p. 11.

(U) Third quarter, the 2d Brigade emphasized basic individual skills maintenance and officer and NCO professional development. The brigade headquarters developed and conducted a 3-week officer professional development class for brigade officers. Following, the CAB NCO's were given a 2-week course at the battalion level.[69]

(U) In the final quarter of the year, the 2d Brigade conducted a CORT, a communications exercise (COMMEX) involving all battalions, and a brigade CPX. The 2d LSB further distinguished itself in these activities, giving performance that clearly demonstrated the unit's ability to coordinate, schedule, and conduct meaningful training as well as its ability to coordinate and support tactical operations. MOS testing and readiness assistance training were judged to have contributed to the improvement of individual and unit performance.[70]

(U) Military and Technical Schools (M&TS). Planning at the Military and Technical Schools continued through the year in an effort to arrive at a table of organization and equipment (TOE) that would reflect the mission of SANG's training center against the restraints of limited resources. The tone was set in the first quarter as OPM and the principal M&TS staff officers coordinated their efforts toward development of a comprehensive and realistic Program Manager's Master Plan (PMMP) for the schools. The proposed goals, objectives, and resources went through numerous discussions and refinements to ensure acceptance of the PMMP during the Country-to-Country review. In the process, the M&TS staff demonstrated its knowledge and maturity through the quality of refinements and new concepts the SANG personnel initiated. The TOE revision was launched as a recommendation by the contractor, and in the first quarter was refined by the M&TS Commander and staff and submitted to HQ SANG for approval.[71]

(U) The TOE was reworked in the third quarter as a joint effort between M&TS and HQ SANG to reflect greater realism with respect to personnel and equipment. Although the equipment portion of the TOE was still unsettled at the end of the year, the personnel portion was approved on 10 September and reflected a decrease of the required 1,908 personnel spaces by 77 due to budgetary limitations.[72]

(U) Contemporaneously with approval of the personnel portion of the TOE, the M&TS was renamed the National Guard Military Schools (NGMS) by the CMO.[73]

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[69] Ibid, p. 15.
[70] Ibid, p. 19.
[71] Ibid, p. 7.
[72] Ibid, pp. 15, 19.
[73] Ibid, p. 19.

(U) Continuing difficulties were experienced during the year due to personnel shortages and other personnel practices. Shortcomings in the area of training development and staff training reflected a lack of officers assigned to the Plans, Evaluation, and Analysis Branch and the lack of approved curriculum development procedures. Particularly disruptive was the practice of SANG of reassigning trained officers into other positions.[74]

(U) In the third quarter of the year, SANG assumed responsibility of the printing operation from Vinnell and was pursuing takeover of the entire publications effort.[75] The SANG Print Plant became the new home for printing equipment formerly situated at the Vinnell camp. Whether the Vinnell work force would continue to be used was to have been decided after September and the Hadj security effort.[76]

(U) The SANG Director of Logistics (DOL) continued to assume increased responsibility for functional areas that had formerly been handled by the school. The turnover of all training property and accountability to SANG personnel was completed by the end of the fiscal year. The Training Equipment, Maintenance, and Transportation Branches moved into new facilities in the fourth quarter, but managed to continue training support with minimal disruption.[77]

(U) Logistics Base Command. As the year began, the Logistics Base Command was still dealing with the many problems that attended replacement of Dodge trucks with new Steyr vehicles. Critical areas of activity were development of maintenance allocation charts, training in support of mechanics and drivers, development of PLLs and ASLs for the combat units, development of stockage objectives for the logistics base, and development of communications retrofit packages to support tactical radio systems within the brigades.[78]

(U) As the year advanced, the LBC began preparations for the Spring FTX and a move to its new headquarters building in Khashm al An (KAA), both of which occurred in the second quarter. In a lighter vein, the LBC planned, organized and directed the annual camel races, also in the second quarter.[79]

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74 Ibid, pp. 12, 15.

75 Reported in the FY84 AHR, a publications backlog for translating and printing Arabic training materials had begun to grow.

76 Ibid, p. 15.

77 Ibid, p. 20.

78 Ibid, p. 8.

79 Ibid, p. 12.

(U) The LBC commander became concerned about property accountability and in the third quarter advocated the transfer of functions from the contractor to the LBC. Quarterly production was down in the third quarter together with working hours due to Ramadan. A care and preservation of supplies in storage (COSIS) program was initiated, however.[80]

(U) Security plans for the KAA facilities were completed and gained implementation approval. Serviceable Class II and IV equipment (clothing and individual equipment, among other items, and construction materials) were relocated to the KAA warehouse from the Nassariyah storage facility, while transfer of functions and property from the contractor self-service supply center to the SANG was still pending. Support to the 1st Brigade's Hadj mission included sending repair parts to the Western Province to be available to the SANG security elements in Mecca. Full operations were resumed at the LBC's apprenticeship facility as tools and equipment were transferred from the contractor to SANG and 19 apprentices enrolled for training, a major milestone for the LBC.[81]

(U) Nonmodernized Unit Training. Nonmodernized SANG units in the Eastern and Western provinces trained for 7 weeks from mid-March to mid-May with special forces A-teams deployed from Fort Bragg, North Carolina. This step had several years of discussion and planning behind it and carried the personal interest of Crown Prince Abdullah. Rated as highly successful, the pilot effort followed a "train the trainers" concept that keyed on officers and NCOs, a total of 190 students. Topics taken up in the 7-week program included weapons, land navigation, leadership, and defensive tactics. The training was completed 16 May 1985.

(U) Light Armored Vehicle Test. A test of Light Armored Vehicles (LAV) to find a possible replacement for the 1st Brigade's gas-powered V-150s was conducted from 26 November to 22 December 1984. OPM and SANG had worked closely to develop the 3-week test plan, which included an extensive list of test parameters in the areas of mobility, maintainability, dependability/reliability, protection/survivability, and firepower. The test report on the six candidate LAVs was finished on 18 February and forwarded to Crown Prince Abdullah. Although OPM SANG worked closely with HQ SANG on the report, the final product was SANG's.[82]

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[80] Ibid, p. 15.
[81] Ibid, p. 19.
[82] Ibid, pp. 8, 12.

(U) As background to developing its LAV requirements, HQ SANG and OPM representatives traveled to the United States in June to acquaint themselves with the US Marine Corps' LAV experience. They visited the USMC LAV Test Facility at 29 Palms, California, and reviewed LAV test results from prototype, production mode, and production vehicles for all variants. They also reviewed LAV courses and related maintenance instruction at the USMC Infantry School at Camp Pendleton, California, and the training program for the LAV Battalion from Camp Lejeune at the US Army Infantry Center at Fort Benning, Georgia. The AMC Project Manager LAV office, AMC also briefed the visitors on contracting and equipment integration problems they would be facing.[83]

(U) Facilities. Phase II of the 5-year Facility Master Plan began with the signing of a contract between the Vinnell Corporation and Leo A. Daly and Company in the fourth quarter. The subcontractor was to provide, among other things, an updated review of existing area land usage and individual building usage at KAA, a plan for expanding the KAA range, a list of facilities needed for each modernized unit, and identification of facilities required to be built or renovated to meet future requirements.[84]

(U) Procurement and Contracts. Phase II of the Force Modernization Program (Contract DAAG99-81-C-0010) with Vinnell Corporation was to expire on 31 December 1985, and work began on developing a successor contract. The PM examined alternative methods for maintaining contractor support for 1986 and 1987, and he, in turn, worked with SANG officials to decide the best approach for contract extension. A request for proposal was issued to Vinnell Corporation on 8 June 1985 outlining a significantly reduced level of activity for the contractor for the 1986 and 1987 contract period. Vinnell's proposal was received on 24 July and underwent technical and price evaluation. Following AMC's approval of the advance procurement plan and justification for noncompetitive procurement, negotiations commenced with Vinnell on 16 September and were close to conclusion at the end of the fiscal year.[85]

(U) The Phase II contract, meanwhile, underwent modifications 48-52 during the first and second quarters. The first set of modifications to the existing contract related to expenditure authority for FY85 and to correction of appropriation data, while in the second quarter the modification called for turning all printing and reproduction responsibility over to SANG by 1 May 1985, which was accomplished. Vinnell was determined to have earned an award fee

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[83] Ibid, p. 16.
[84] Ibid, p. 20.
[85] Ibid, pp. 12, 13, 16, and 20.

under the contract amounting to 91 percent for the last half of 1984. The 6-month award fee criteria and weights underwent change for the final 6-month period of the Phase II contract.[86]

(U) King Fahad Hospital. SANG continued on a path of contracting directly for medical services following expiration of the contract between OPM SANG and the Hospital Corporation of America, Mideast (HCAME), Ltd. With the contract due to expire on 28 February 1985, SANG at first withheld formal approval to extend the contract by 6 months due to its interest in competitively bidding the medical services themselves. Shortly before expiration, however, a 3-month extension was approved in the amount of $19.7 million, and all subcontracts were also extended as well. Then in the third quarter, the contract was extended for an additional 9 months to 28 February 1986 at the request of SANG, which estimated it would take that long before a follow-on contractor could be selected and mobilized. The extension, which also provided for additions to the scope of work to include dermatology, allergy, and dialysis services, as well as increased bed levels in pediatrics, short stay, and extended care units, was in the amount of $73.8 million.[87]

(U) SANG requested OPM assistance in conducting the full competition leading to award of a new contract. The Acquisition Management Division provided recommendations to SANG as to type and length of contract as well as specific steps to follow in the acquisition process.[88]

(U) In other actions, the HCAME contract was modified in the first quarter to allow an additional $20 million in the contract amount to fund cost growth due to increases beyond the control of either the contractor or the US Government. Also in this period, a modification of $20,426,226 went through to finalize the amount needed for equipment and spare parts during the life of the contract. As with the contract extensions, both modifications required AMC review and approval due to high dollar values.[89]

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[86] Ibid, pp. 8, 12, and 16.
[87] Ibid, pp. 9, 13, and 17.
[88] Ibid, p. 9.
[89] Ibid.

GLOSSARY

AA&E	Arms, Ammunition and Explosives
AAFES	Army and Air Force Exchange Service
AAH	Advanced Attack Helicopter
AAI	Automated Autodin Interface
AAO	Authorized Acquisition Objective
AAP	Army Ammunition Plant
AAWS-M	Advanced Anti-Tank Weapon System - Medium
ABCA	American, British, Canadian, Australian
AC	Alternating Current
ACA	Air Clearance Authority
ACADA	Automatic Chemical Agent Detector and Alarm
ACAP	Army Chemical Action Plan
ACC	Army Commander's Conference
AMCCPS	Army Materiel Command Civilian Personnel System
ACCS	Army Command and Control System
ACE	Armored Combat Earthmover
ACES	Airdrop Controlled Exit System
ACES	Army Continuing Education System
ACOA	Assistant Comptroller of the Army
ACOCS	Army Customer Order Control System
ACPERS	Army Civilian Personnel System
ACRC	Army Calibration and Repair Centers
ACS	Army Community Service
ACSIM	Assistant Chief of Staff for Information Management
ACTEDS	Army Civilian Training Education and Development System
AD	Advanced Development
AD	Air Defense
AD	Army Depot
ADA	Air Defense Artillery
ADCCS	Air Defense Command Control System
ADCS	Assistant Deputy Chief of Staff
ADDS	Army Data Distribution System
ADEA	Army Development and Employment Agency
ADES	Air Defense Engagement System
ADEWS	Air Defense Electronic Warfare System
ADP	Automatic Data Processing
ADS	Ammunition Delivery Systems
ADSPEC	Additional Specialty
ADT	Air Data Terminal
AECA	Arms Export Control Act
AERB	Army Educational Requirement Board
AFD	Army Functional Dictionary

AFH	Army Family Housing
AFIT	Air Force Institute of Technology
AFO	Albuquerque Field Office
AFLC	Air Force Logistics Command
AFP	Annual Funding Program
AFSC	Air Force Systems Command
AFT	Annual Financial Targets
AFV	Army Fighting Vehicle
AG	Adjutant General
AGES	Air to Ground Engagement Simulators
AGES	Air to Ground Engagement System
AGS	Armored Gun System
AHIP	Advanced Helicopter Improvement Program
AHR	Annual Historical Review
AID	Acquisition Integrated Database
AIF	Army Industrial Fund
AIMI	Aviation Intensively Managed Item
AIMI-X	Army Intensive Managed Item - Expanded
AIPN	Army Integrated Publishing Network
AIRDC	Area Ionization Radiation Dosimetry Center
AKERR	Allied Kinetic Energy Recovery Rope
AL	Acquisition Letter
ALAD	Automatic Liquid Agent Detector
ALC	Army Learning Centers
ALEP	AMC Logistics Excellence Program
ALMC	US Army Logistics Management Center
ALMSA	Automated Logistics Management Systems Activity
ALO	Authorized Level of Organization
ALOC	Air Lines of Communication
AMC	US Army Materiel Command
AMCADS	AMC Announcement Distribution System
AMCAPE	AMC AMDF Product Enhancement
AMCCC	AMC Commander's Conference
AMCCOM	US Army Armament, Munitions, and Chemical Command
AMCD	Army Materiel Command Division
AMC/D	AMC Directions
AMCDS	AMC Deputy Chief of Staff for Security Assistance
AMCEP	AMC Exchange Program
AMCLOG	AMC Logistics
AMCLOG 21	AMC Logistics 21
AMCMB	AMC Maintenance Board
AMC-MOPES	AMC Mobilization and Operations and Operations and Emergency Planning and Execution System
AMCPSCC	AMC Packing, Storing and Containerization Center
AMCRM	AMC Resource Management
AMC-SA	AMC Support Activity
AMCSM	AMC Supply, Maintenance and Transportation
AMDF	Army Master Data File

AMETA	US Army Management Engineering Training Activity
AMHA	Army Management Headquarters Activities
AMMRC	Army Materials and Mechanics Research Center
AMD	Acquisition Management Division
AMDF	Army Master Data File
AMETA	US Army Management Engineering Training Agency
AMIM	Army Modernization Information Memorandum
AMIT	Aviation Maintenance Interchangeable Trainer
AML	Army Missile Laboratory
AMMDEX	Army Maintenance Management Data Exchange
AMMRC	Army Materials and Mechanics Research Center
AMP	Army Materiel Plan
AMP-MOD	Army Material Plan Modernization
AMSAA	Army Materiel Systems Analysis Activity
AMSCO	Army Management Structure Code
ANAD	Anniston Army Depot
ANFO	Ammonium Nitrate Fuel Oil
AOAP	Army Oil Analysis Program
AOD	Area-Oriented Depots
AOD-MOD	Area-Oriented Depot - Modernization
AOE	Army of Excellence
APA	Army Procurement Appropriations
APC	Armored Personnel Carriers
APDS-T	Armor Piercing Discarding Sabot-Tracing
APE	Ammunition Peculiar Equipment
APESO	Army Product Engineering Service Office
APFSDS	Armor-Piercing, Fin-Stabilized Disposing Sabot
APG	Aberdeen Proving Ground
APM-MED	Assistant Project Manager for Medical Management
APORS	Army Performance Oriented Review and Standards
APU	Auxiliary Power Unit
AQL	Acceptance Quality Level
AQL	Advanced Quick Look
AR	Army Regulation
ARD	Armor Training Devices
ARDC	Armaments Research and Development Center
ARES	AMC Readiness Evaluation System
ARI	Army Research Institute
ARNG	Army National Guard
ARO	Army Research Office
ARRADCOM	US Army Armament Research and Development Command
ARRCOM	US Army Armament Materiel Readiness Command
ARRED	US Army Readiness Command
ARSTAF	Army Staff
ARTADS	Army Tactical Data Systems
ARTBASS	Army Training Battle Simulation System
ASA (IL&FM)	Assistant Secretary of the Army for Installations, Logistics and Financial Management

ASA(FM)	Assistant Secretary of the Army for Financial Management
ASAMPLE	Army Security Assistance Materiel Projection and Logistics Estimate
ASAP	Army Science Assistance Program
ASARC	Army Systems Acquisition Review Council
ASAS	All Source Analysis System
ASB	Army Science Board
ASC	Air Standardization Committee
ASC	Assembled Storage Configuration
ASCO	Advanced Systems Concept Organization
ASCP	Ammunition Specialist Career Program
ASF	Army Stock Fund
ASH	Advanced Scout Helicopter
ASI	Additional Skill Identifier
ASL	Atmospheric Sciences Laboratory
ASL	Authorized Stockage List
ASRP	Ammunition Stockpile Reliability Program
ASRS	Automated Storage and Retrieval System
AST	Area Support Team
ATACS	Army Tactical Communications System
ATCAP	Army Telecommunications Automation Program
ATE	Automatic Test Equipment
ATM	Anti-Tactical Missile
ATPG	Automatic Test Program Generators
ATSE	Army TPS Support Environment
ATSS	Automatic Test Support Systems
ATST	Area TMDE Support Teams
ATTO	Army TMDE Technology Office
ATTL	Army Test Technology Laboratory
AUTODIN	Automatic Digital Network
AVRADA	Avionics Research and Development Activity
AVRADCOM	US Army Aviation Research and Development Command
AVSCOM	US Army Aviation Command
AVSF	Automatic Voice Switching Facility
AWESS	Automatic Weapon Effects Signature Simulator
BCE	Base-Level Commercial Equipment
BCE	Baseline Cost Estimate
BCS	Battery Computer Systems
BDAR	Battle Damage Assessment and Repair
BDFAA	Biological Defense Functional Area Analysis
BFA	Battlefield Functional Areas
BFA	Blank Fire Adapters
BFTA	Bulk Fuel Tank Assembly
BFV	Bradley Fighting Vehicle
BFVA	Bradley Fighting Vehicle Armament
BFVS	Bradley Fighting Vehicle System

BIDE	Basic Identity Data Elements
BII	Basic Issue Items
BIT	Built-In Test
BITE	Built-In Test Equipment
BMDSCOM	Ballistic Missile Defense System Command
BMAR	Backlog of Maintenance and Repair
BMD	Ballistic Missile Defense
BMDSCOM	Ballistic Missile Defense System Command
BMY	Bowen-McLaughlin York
BN	Battalion
BO	Blanket Order
BOI	Base of Issue
BOIP	Basic Issue Plan
BRDC	Belvoir Research and Development Center
BRL	Ballistics Research Laboratory
BSE	Base Support Installation
BSEP	Basic Skills Education Plan
BSTF	Base Shop Test Facility
BTA	Bench Top Analysis
BSTS	BST Stations
BTU	British Thermal Unit
BUCS	Backup Computer System
CAA	Concepts Analysis Agency
CAAS	Combined Artillery/Aviation Simulator
CAB	Combined Arms Battalion
CADM	Cost Analysis for Decision Making
CADS	Containerized Ammunition Distribution System
CAHSS	Computer Assisted Health Services Simulation
CAIRA	Chemical Accident/Incident Response and Assistance
CALS	Computer Aided Logistic Support
CALSIM	Calibration Simulation
CAM	Computer Aided Manufacture
CAMDS	Chemical Agent and Munition Disposal System
CAO	Central Accounting Office
CARC	Chemical Agent Resistant Coating
CARNS	Collision Avoidance Radar Navigation System
CAS	Combined Arms School
CASPER	Conventional Ammunition Special Review
CASPR	Command Automated System for Procurement
CAWCF	Conventional Ammunition Working Capital Fund
CAWS	Cannon Artillery Weapon System
CBD	Clean-Burn Diesel
CBI	Computer-Based Instruction
C^2	Command and Control
C^3	Command, Control, and Communications
C^3I	Command, Control, Communications, and Intelligence
CCB	Configuration Control Board

CCE/SMHE	Commercial Construction Equipment and Selected Materiel Handling Equipment
CCG	Configuration Control Group
CCM	Central Case Management
CCP	Consolidation and Containerization Point
CCPM	Command Career Program Manager
CCS	Communications Control System
CCSS	Commodity Command Standard System
CDA	Catalog Data Activity
CDAC	Cost Discipline Advisory Committee
CDC	Control Data Corporation
CDDB	Central Demand Data Base
CDWS	Cost Data Worksheet
CECOM	US Army Communications-Electronics Command
CEE	Civilian Employment Estimate
CEGE	Combat Equipment Group, Europe
CELP	Civilian Employment Level Plans
CELT	Coherent Emitter Testbed
CENTACS	US Army Center for Tactical Computer Systems
CEP	Civilian Employment Projection
CERL	Construction Engineering Research Laboratory
CERCLA	Comprehensive Environment Response Compensation and Liability Act
CERCOM	US Army Communications and Electronics Materiel Readiness Command
CESMR	Command Equipment and Supply Management Review
CFA	Central Field Agency
CFAA	Chemical Functional Area Analysis
CFV	Cavalry Fighting Vehicle
CG	Commanding General
CGS	Command Grade Ceiling
CGS	Commander's Guidance Statement
CHAALS	Communications High Accuracy Airborne Location Subsystem
CICA	Competition in Contracting Act
CIE	Clothing Individual Equipment
CINCPAC	Commander-in-Chief Pacific
CINCUSAREUR	Commander-in-Chief, US Army, Europe
CIP	Career Intern Program
CIS	Congressional Information Service
CIS-IL	Centralized Integrated System-International Logistics
CIVR	Configuration Item Verification Review
CLAMS	Clearing Lane Marking System
CLFFK	Company Level Field Feeding Kit
CLIN	Contract Line Item Number
CLS	Contractor Logistics Support
CLSSA	Cooperative Logistics Supply Support Arrangements
CM	Countermeasures

CMA	Chemical Materiel Acquisition
CMO	Chief of the Military Organization
CMO	Configuration Management Office
CMOS	Complementary Metal-Oxide Semiconductor
CMS	Conversational Monitoring System
CMSF	Command Morale Support Fund
COA	Comptroller of the Army
COA	Current Operating Allowance
COB	Command Operating Budget
COBE	Command Operating Budget Estimate
COE	US Army Corps of Engineers
COEA	Cost and Operational Effectiveness Analysis
COEI	Components of End Items
COFT	Conduct of Fire Trainer
COMMEL	Communications Electronics
COMMEX	Communications Exercise
COMSEC	Communications Security
CONUS	Continental United States
COOP	Continuation and Operation Plan
COP	Continuation of Pay
CORADCOM	US Army Communications Research and Development Command
CORT	Combined Operational Readiness Test
CORTS	Command Operational Readiness Test System
COSCOM	Corps Support Command
COSIS	Care of Supplies in Storage
CPAF	Cost-Plus-Award-Fee
CPIR	Command Performance Indicator Review
CPE	Collective Protection Equipment
CPF	Caribbean Peacekeeping Forces
CPFF	Cost-Plus-Fixed-Fee
CPIF	Cost Plus Incentive Fee
CPIR	Command Performance Indicator Review
CPO	Civilian Personnel Office
CPP	Camouflage Pattern Painting
CPT-1	Comparative Production Test-1
CPX	Command Post Exercise
CQQPRI	Condensed Qualitative and Quantitative Personnel Requirements Information
CRA	Continuing Resolution Authority
CRDC	Chemical Research and Development Center
CRM	Computer Resource Management
CRT	Cathode Ray Tubes
CRTC	Cold Regions Test Center
CSA	Chief of Staff, Army
CSC	Combat Support Center
CSP	Concurrent Spare Parts
CS^2	Combat Service Support

CSS	Combat Service Support
CSSR	Cost Schedule Status Report
CSTAL	Combat Surveillance and Target Acquisition Laboratory
C/SCSC	Cost/Schedule Control System Criteria
CTDR	Commercial Training Device Requirements
CTA	Central TMDE Activity
CTED	Civilian Training, Education and Development
CTPG	Comprehensive Test Plan Group
CTS	Contact Test Set
CTX	Center of Technical Excellence
CUCV	Commercial Utility Cargo Vehicle
CVE	Combat Vehicle Evaluation
CW	Chemical Warfare
CW/BB	Chemical Warfare and Biological Board
CY	Calendar Year
DA	Department of the Army
DAAS	Defense Automatic Addressing System
DAES	Defense Acquisition Executive Summary Reports
DAIG	DA Inspector General
DAIP	Defense Acquisition Improvement Program
DAMPL	DA Military Priority List
DAMWO	DA Modified Work Order
DAP	Decontamination Apparatus Portable
DAR	Defense Acquisition Regulation
DARCOM	US Army Materiel Development and Readiness Command
DARPA	Defense Advanced Research Projects Agency
DAS	Defense Audit Service
DASC-L&MM	Deputy Assistant Secretary of Defense for Logistics and Materiel Management
DATEA	DA TMDE Executive Agent
DATIP	DA TMDE Implementation Plan
DATP	Detroit Army Tank Plant
DATPIP	DA PIL In-Process Review Panel
DC	Direct Current
DCAA	Defense Contract Audit Agency
DCAP	DARCOM Chemical Action Plan
DCAS	Defense Contract Administration Services
DCG	Deputy Commanding General
DC^3I	Distributed Command, Control, Communications, and Intelligence
DCGRDA	Deputy Commanding General for Research, Development and Acquisition
DCGMR	Deputy Commanding General for Materiel Readiness
DCGRM	Deputy Commanding General for Resource Management
DCS	Deputy Chief of Staff
DCS	Dial Central Offices

DCSAIM	Deputy Chief of Staff for Automation and Information Management
DCSI	DCS for Intelligence
DCSIM	Deputy Chief of Staff for Information Management
DCSLOG	Deputy Chief of Staff for Logistics
DCSOPS	Deputy Chief of Staff for Operations
DCSLS	DCS for Planning Technology
DCSPER	Deputy Chief of Staff for Personnel
DCSRDA	Deputy Chief of Staff for Research, Development and Acquisition
DCSRM	Deputy Chief of Staff for Resource Management
DCSSMT	Deputy Chief of Staff for Supply, Maintenance and Transportation
DDN	Defense Data Network
DDSP	Defense Development Sharing Program
DEA	Data Exchange Annexes
DEDCNM	Deputy Executive Director for Chemical and Nuclear Matters
DEB	Digital European Backbone
DEF	Duplicate Emergency Files
DEFPLAN	Defense Plan
DEPSECDEF	Deputy Secretary of Defense
DESCOM	US Army Depot Systems Command
DESR	Defense Environmental Status Report
DEVA	Development Acceptance
DEWS	Division Support Weapons Systems
D&F	Determination and Findings
DF	Direction Finder
DFSR	Detailed Functional System Requirement
DID	Data Item Description
DISREP	Discrepancy in Shipment Report
DIVAD	Division Air Defense
DLA	Defense Logistics Agency
DLIELC	Defense Language Institute English Language Center
DLSIE	Defense Logistics Studies Information Exchange
DMA	Deputy for Management and Analysis
DMATS	Defense Metropolitan Area Telephone System
DMD	Digital Message Device
DMIS	Directorate for Management Information Systems
DMS	Defense Materials Systems
DMS	Diminishing Manufacturing Sources
DMSMS	Diminishing Manufacturing Sources and Materials Shortages
DMWR	Depot Maintenance Work Requirement
DOCMOD	Documentation Modernization
DOD	Department of Defense
DODAAC	Department of Defense Activity Address Code
DODD	Department of Defense Directive

DODSAP	DOD Small Arms Serialization Program
DOE	Department of Energy
DOIM	Directors of Information Management
DOL	Director of Logistics
DOMS	Director of Military Support
DOS	Days of Supply
DOT	Department of Transportation
DPAD	Defense Priorities and Allocations Systems
DPM	Department of Project Management
DPS	Defense Priorities System
DRAAG	Design Review and Acceptance Groups
DRCPT	Directorate for Personnel, Training and Force Development
DRES	DARCOM Readiness Evaluation System
DRIS	Defense Regional Interservice Support
DRMS	Discrepancy Report Monitoring System
DRS	Deficiency Reporting System
DS	Direct Support
DSAA	Defense Security Assistance Agency
DSACS	Defense Standard Ammunition Computer System
DSARC	Defense Systems Acquisition Review Council
DSCS	Defense Satellite Communications Systems
DSETS	Direct Support Electrical Test Set
DS/GS	Direct Support/General Support
DSMC	Defense Systems Management College
DSN	Defense Switch Network
DSNAA	Defense Switchboard Network Access Area
DSREDS	Digital Storage and Retrieval Engineering Data System
DSS	Direct Support System
DSSP	Defense Standardization and Specification Program
DSWS	Division Support Weapons System
DT	Development Test
DT/OT II	Design Test and Operational Tests
DTPG	Defense Technology and Procurement Group
DTRDC	David Taylor R&D Center
DTSS	Digital Topographic Support System
DVAL	Data Link Vulnerability Analysis
DVT	Design Verifications Testing
DWASP	DOD Standard Warehousing and Shipping Automated System
EA	Economic Analysis
EAC	Echelon Above Corps
EARA	Equipment Authorization Review Activity
ECCCS	European Command and Control Considerations Systems
ECIL	Exercise Critical Items List
ECIP	Energy Conservation Investment Program
ECM	Electronic Countermeasures
ECP	Engineering Change Proposal

ED	Engineering Development
EDC	Eastern Distribution Center
EDCA	Executive Director for Conventional Ammunition
EDCNM	Executive Director for Chemical and Nuclear Matters
EDM	Engineering Development Model
EDT	Engineering Design Test
EEAP	Energy Engineering Analysis Program,
EELS	Environmental Enclosure Laboratory System
EDT	Engineering Development Test
EDT	Executive Director for TMDE
EEO	Equal Employment Office
EF	Essential Force
EGWFS	Essential General War Functions Statements
EHF	Extremely High Frequency
EIC	End Item Code
EIR	Equipment Improvement Recommendations
EIS	Environmental Impact Statement
EIS	Executive Information System
EISN	Experimental Integrated Switched Network
EL	Electroluminescent
ELINT	Electronic Intelligence
EMI	Electro-Magnetic Interface
EMP	Electromagnetic Pulse
EMRRS	Enhanced Materiel Readiness Reporting System
EO	Equal Opportunity
EOD	Eastern Operations Division
EOTF	Electro-Optics Test Facility
EOH	Equipment On Hand
E2 PROM	Electronically Erasable Programmable ROM
EOSO	Equal Opportunity Staff Officer
EPA	Environmental Protection Agency
EPIS	Environmental Projects Information System
EQD	Environmental Quality Division
ER	Enhanced Radiation
ERADCOM	US Army Electronics Research and Development Command
ERC	Equipment Readiness Code
ERP	Environmental Restoration Program
ERPSEL	Essential Repair Parts Stockage Lists
ERS	Emergency Relocation Site
ESD	Electrostatic Discharges
ESM	Electronic Support Measure
ESSS	External Stores Support System
ESTIMATE	Estimation of Shortfalls in Theater Intermediate Maintenance for AMC TAA Evaluation
ETAS	Elevated Target Acquisition System
ETDL	Electronic Technology and Devices Laboratory
ETF	Electronic Test Facility
ETS	European Troop Strength

ETSSC	US Army Electronic Research and Development Command, Tactical Software Center
EUSA	Eighth US Army
EW	Electronic Warfare
EWL	Electronic Warfare Laboratory
EXCAP	Exercise Capability Program
FAA	Foreign Assistance Act
FAA	Functional Area Assessment
FAASV	Field Artillery Ammunition Support Vehicle
FAB	Field Artillery Battery
FABS	FMS Accounting and Billing System
FACC	Ford Aerospace Communications Center
FAO	Finance and Accounting Offices
FAR	Federal Acquisition Regulation
FASCAM	Family of Air Scatterable Mines
FASIS	Field Artillery Systems Independent Assessment
FAT	First Article Test
FAT-C	First Article Test-Contractor
FATDS	Field Artillery Tactical Data Systems
FATMT	Field Artillery Turret Maintenance Trainer
FCC	Family Child Care
FCG	Functional Coordinating Group
FCSCWSL	Fire Control and Small Caliber Weapon Systems Laboratory
FDE	Force Development Evaluation
FDMA	Frequency Division Multiple Access
FDTE	Force Development Testing and Experiments
FEDC	Field Exercise Data Collection
FEP	Front-End Planning
FFMIP	FMS Financial Management Improvement Program
FFP	Firm Fixed Price
FFTS	Freight Forwarded Tracking System
FG	Field Grade
FHMA	Family Housing Management Account
FICS	FMS Integrated Control System
FIST DMD	Fire Support Team Digital Message Device
FISTV	Fire Support Team Vehicle
FLIR	Forward-Looking Infrared
FM	Field Manual
FMC	Fully Mission Capable
FMIP	Financial Management Improvement Program
FMMC	Force Modernization Management Course
FMO	Force Modernization Office
FMS	Foreign Military Sales
FMSA	Foreign Military Sales Act
FN	Fabrique Nationale
FOD	Foreign Object Damage

FOE	Follow-on Evaluation
FOG-M	Fiber Optic Guided Missile
FORSCOM	US Army Forces Command
FOTS-LH	Fiber Optics Transmission System - Long Haul
FPA	Functional Process Assessment
FPI	Federal Prison Industries
FPI	Fixed Price Incentive
FPIF	Fixed Price Incentive Firm
FPO	Field Placement Office
FRA	Funded Reimbursable Authority
FRET	Fielding Requirements
FRG	Federal Republic of Germany
FSB	Forward Support Battalions
FSD	Full-Scale Development
FSED	Full-Scale Engineering Development
FSS	Fire Support System
FST	Fire Support Terminal
FSTC	Foreign Science and Technology Center
FTP	Full Time Permanent
FTX	Fielded Tactical Exercise
FTX	Field Training Exercise
FU	First Unit
FUE	First Unit Equipped
FUED	First Unit Equipped Date
FVS	Fighting Vehicle System
FY	Fiscal Year
FYDP	Five-Year Development Plan
GAF	German Air Force
GLA	General Ledger by Mission
GLLD	Ground Laser Locator Designator
GAI	Gordano Associates Incorporated
GAO	Government Accounting Office
GCS	Ground Control Station
GDT	Ground Data Terminal
GFM	Government Furnished Materiel
GLD	Ground Laser Designator
GLLD	Ground Laser Locator Designator
GMPA	US Army General Materiel and Petroleum Activity
GO	General Officer
GO/SES	General Officer/Senior Executive Service
GOCO	Government-Owned Contractor-Operated
GOE	Government of El Salvador
GOG	Government of Greece
GOI	Government of India
GOI	Government of Iran
GON	Government of Netherlands
GOS	Government of Switzerland

GOSC	General Officer Steering Committee
GPETE	General Purpose Electronic Test Equipment
GPO	Government Printing Office
GPS	Global Positioning System
GR-CS	Guardrail Common Sensor
GS	General Support
GSA	General Services Administration
GSE	Ground Support Equipment
GUFS	Gunfire Simulator
G/VLLD	Ground/Vehicle Laser Locator Designator
HA	Hellenic Army
HAAP	Holston Army Ammunition Plant
HAB	Heavy Assault Bridge
HAC	House Armed Services Subcommittee on Appropriations
HAC	Hughes Aircraft Corporation
HACS&I	House Appropriations Committee Surveys and Investigations
HASC	House Armed Services Committee
HBCU	Historically Black Colleges and Universities
HCA	Head of Contracting Activity
HCAME	Hospital Corporation of America, Mideast
HDL	Harry Diamond Laboratories
HE	High Explosive
HEDP	High Explosive Dual Purpose
HEDS	High Endoatmospheric Defense System
HEI	Highly Explosive Incendiary
HEL	Human Engineering Laboratory
HELIP	Hawk European Limited Improvement Program
HELP	Howitzer Extended Life Program
HEM	Heavy Equipment Maintenance
HEMAT	Heavy Expanded Mobility Ammunition Trailer
HEMTT	Heavy Expanded Mobility Tactical Truck
HET	Heavy Equipment Transporter
HF	High Frequency
HFDF-R	High Frequency Direction Finder - Rear
HFE	Human Factors Engineering
HHA	Health Hazard Assessment
HHB	Headquarters and Headquarters Battery
HHC	Headquarters and Headquarters Company
HHS	Health and Human Services
HIP	Howitzer Improvement Program
HMMPV	High Mobility Multi-Purpose Vehicle
HMMWV	High Mobility Multi-Purpose Wheeled Vehicle
HMX	High Melt Explosive
HNS	Host Nation Support
HQCPO	Headquarters Civilian Personnel Office
HQDA	Headquarters, Department of the Army

HTLD	High Technology Light Division
HTMD	High Technology Motorized Division
HWAAP	Hawthorne Army Ammunition Plant
HWM	Hazardous Waste Material
HWSA	Hazardous and Solid Waste Amendments
Hz	Hertz
IC	Intermediate Command
ICAMP	Integrated Conventional Ammunition Maintenance Plan
ICAP	Integrated Conventional Ammunition Producers
ICAPP	Integrated Conventional Ammunition Procurement Plan
ICE	Independent Cost Estimates
ICF	Internal Calibration Facilities
ICL	Internal Calibration Laboratory
ICM	Improved Conventional Munitions
ICOZ	Installation Compatible Use Zone
ICP	Inventory Control Point
ICUZ	Installation Compatible Use Zone
ID	Infantry Division
9ID	9th Infantry Division
IEMS	Installation Equipment Management System
I/EW	Intelligence/Electronic Warfare
IFF	Identification Friend or Foe
I/FOA	Installation and Activity/Field
IFTE	Intermediate Forward Test Equipment
IGRV	Improved Guardrail V
IOC	Initial Operational Capability
IICA	Intensive In-Plant Cost Analysis
ILIF	International Logistics Information File
ILS	Integrated Logistics Support
ILSP	Integrated Logistics Support Plan
IMA	Intelligence Materiel Activity
IMDSO	Intelligence Materiel Development Support Office
IME	International Materiel Evaluation
IMET	International Military Education and Training
IMP	Information Management Plan
INSCOM	Intelligence Security Command
IOC	Initial Operational Capability
IP	Improved Performance
IPF	Initial Production Facilities
IPIC	Implementation of Program Integration Capabilities
IPO	Industrial Preparedness Operations
IPPL	Industrial Preparedness Planning List
IPR	In-Process Review
IPT	Initial Production Testing
IPT-G	Initial Production Test-Government
IRAC	Interdepartment Radio Advisory Committee
IR&D	Independent Research and Development

IkO	Inventory Research Office
ISA	Interservice Support Agreement
ISAFS	Integrated Safing, Arming, Firing Set
ISC	Information Systems Command
ISO	International Standardization Organization
ISP	Information Systems Plan
ISS	Information Supply System
ITC	Instructor Training Course
ITPF	Individual Tank Precision Fire
ITV	Improved TOW Vehicle
JACADS	Johnston Atoll Chemical Agent Disposal System
JATF	Johnston Island Assessment Task Force
JATM	Joint Anti-Tactical Missile
JCAH	Joint Commission on Accreditation of Hospitals
JCAP	Joint Conventional Ammunition Program
JCAP/CG	Joint Conventional Ammunition Program Coordinating Group
JCMC	Joint Crisis Management Capability
JCS	Joint Chiefs of Staff
JDMAG	Joint Depot Maintenance Advisory Group
JEDS	Jet Engine Decontamination System
JICA	Johnston Island Chemical Activity
JIRSG	Joint Inter-Service Resource Study Group
JLC	Joint Logistics Commanders
JOAP	Joint Oil Analysis Program
JOPS	Joint Operations Planning System
JP-AT	Joint Panel on Automatic Testing
JPCG	Joint Packaging Coordinating Group
JPIWG	Joint Physical Inventory Working Group
JR	Joint Review
JRSC	Jam Resistant Secure Communications
JSDF	Japan Self Defense Force
JSOR	Joint Services Operational Requirement
J-STARS	Joint Surveillance and Target Attack Radar System
JTA	Joint Table of Allowances
JTACMS	Joint Tactical Missile System
JTEG	Joint Technology Exchange Group
JTG	Joint Task Group
JTIDS	Joint Tactical Information Distribution System
JTWG	Joint Test Working Group
JUSMAT	Joint US Military Mission for Aid to Turkey
JUSMG	Joint US Military Group
KAA	Khashm Al An
KFH	King Fahad Hospital
kn	Knot

kVA	Kilovolt Ampere
kW	Kilowatt
LAB	Light assault Bridge
LABCOM	US Army Laboratory Command
LAD	Logistics Assistance Details
LAF	Lebanese Armed Forces
LAMP-H	Lighter, Amphibian, Heavy Lift
LAN	Local Area Networks
LAO	Logistics Assistance Office
LAP	Load, Assemble and Pack
LAP	Logistics Assistance Program
LAR	Logistic Assistance Representative
LARC-LX	Lighter, Amphibian, Resupply Cargo, 60-Ton
LASR	Low Altitude Surveillance Radar
LATP	Lima Army Tank Plant
LAV	Light Armored Vehicle
LAW	Light Assault Weapon
LBAD	Lexington-Bluegrass Army Depot
LBC	Logistics Base Command
LCA	Logistic Control Activity
LCSE	Life Cycle Support and Engineering
LCSS	Land Combat Support System
LCSS	Life Cycle Software Support
LCU	Landing Craft Utility
LCWSL	Large Caliber Weapon System Laboratory
LEA	Logistics Evaluation Agency
LEAD	Letterkenny Army Depot
LEIP	Laboratory Effectiveness Improvement Program
LEM	Light Equipment Maintenance
LEX-CAP	Lexington-Blue Grass Depot Activity Community Action Plan
LFATDS	Lightweight Field Artillery Tactical Data System
LHTEC	Light Helicopter Turbine Engine Company
LHX	Light Helicopter Experimental
LIC	Low Intensity Conflict
LID	Light Infantry Division
LIN	Line Item Number
LMC	Logistics Management Center
LOA	Letter of Agreement
LOA	Letter of Offer and Acceptance
LOGAMP	Logistics and Acquisition Management Program
LOG	Logistics
LOGCAP	Logistics Civilian Augmented Program
LOGEX	Logistical Exercises
LOGMARS	Logistics Applications of Automated Marking and Reading Symbols
LOGPLAN	Logistics Systems Plan

LOG R&D	Logistics Research and Development
LOGWP	Logistics Working Party
LOI	Letter of Instruction
LOO	Letter of Offer
LOR	Levels of Repair
LOTA	Low Observable Technology and Application
LP	Limited Production
LRFBS	Letter Requests for Bid Sample
LRIP	Limited Rate Initial Production
LRRDAP	Long Range Research, Development and Acquisition Plan
LRU	Line Replaceable Unit
LSB	Logistics Sustaining Base
LSI	Large Scale Integrated
LSA	Logistic Support Arrangement
LSAO	Logistics Systems Analysis Office
LSPR	Logistics Systems Program Review
LSRC	Logistics System Review Council
LSSA	Logistic Systems Support Activity/Agency
LSV	Logistics Support Vessel
LTG	Lieutenant General
LUPS	Logistics Unit Productivity Study Program
MAAG	Military Assistance Advisory Group
MAC	Military Airlift Command
MACI	Military Adapted Commercial Item
MACOM	Major Army Command
MADM	Medium Atomic Demolition Munition
MADP	Mission Area Development Plan
MAG	Military Assistance Grant
MAM	Materiel Acquisition Management
MAMP	Mission Area Materiel Plans
MAMS	Materiel and Maintenance Management
MANPRINT	Manpower and Personnel Integration
MAP	Military Assistance Program
MAP/GA	Military Assistance Program/Grant Aid
MARC	Manpower Allocation Requirements Criteria
MARDIS	Modernized Army Research and Development Information System
MARED	Materiel Acquisition and Readiness Executive Development
MAS	Military Agency for Standardization
MASS	Managing Analytical Support Services
MBO	Management-By-Objectives
MCA	Military Construction, Army
MCDEC	Marine Corps Development and Education Center
MCF	Military Computer Family
MCL	Mobile Chemical Laboratory
MCPE	Modular Collective Protection Equipment
MCS	Maneuver Control System

M-Day	Mobilization Day
MDE	Major Defense Equipment
Non-MDE	Non-Major Defense Equipment
M-DEP	Management Decision Packages
MDMS	Maintenance Data Management System
MDW	Military District of Washington
MEA	Management Engineering Activity
MEA	Mobilization and Emergency Actions
MENS	Mission Essential Need Statement
MEO	Most Efficient Organization
MEP	Mobile Electric Power
MEP	Mission Equipment Package
MEPS	Military Enlistment Processing Station
MEPSCAT	Military Enlistment Physical Strength Capacity Test
MERADCOM	US Army Mobility Equipment Research and Development Command
MERDIP	Materiel Excess, Redistribution and Disposal Improvement Program
MET	Maintenance Expenditure Limit
MFA	Material Fielding Agreement
MFP	Material Fielding Plan
MFR	Memorandum for Record
MFWS	Multi-Function Workstation
MG	Machine Gun
MG	Major General
MI	Military Intelligence
MIA	Missile Intelligence Agency
MIB	Mechanized Infantry Battalion
MICNS	Modular Integrated Communication and Navigation System
MICOM	US Army Missile Command
MICOS	Management Information Control System
MILDEPS	Military Departments
MILES	Multiple Integrated Laser Engagement System
MILPERCEN	US Army Military Personnel Center
MILPO	Military Personnel Office
MILSBILLS	Military Standard Billing System
MILSTAMP	Military Standards Transportation and Movement Procedures
MIL-STD	Military Standard
MIP	Model Installation Program
MIRADCOM	US Army Missile Research and Development Command
MIRCOM	US Army Missile Materiel Readiness Command
MIS	Management Information Systems
MISMO	Maintenance Interservice Support Management Office
MISPC	Mechanized Infantry Squad Proficiency for Information Management
MLR	Mobile Rail Loading Ramp
MLRS	Multiple Launch Rocket System

MLRS/TGW	Multiple Launch Rocket System/Terminal Guidance Warhead
MMBF	Mean Miles Between Failure
MMCA	Minor MCA
MMD	Medical Management Division
MMS	Multi-Machine Scheduler
MMT	Manufacturing Methods and Technology
MMT	Morse Mission Trainer
MOA	Memorandum of Agreement
MOBREM	Mobilization Requirement Model
MOC	Management of Change
MOS	Military Occupational Specialty
MOU	Memorandum of Understanding
MP	Military Police
MPG	Mobile Protected Gun
MPGS	Mobile Protected Gun System
MPL	Mandatory Parts List
MRC	Materiel Readiness Commands
MRHS	Materiel Requisition History File
MRIS	Modernization Resource Information Submission
MRO	Materiel Release Order
MRSA	Materiel Readiness Support Activity
MRWG	Manpower Review Working Group
MSC	Major Subordinate Command
MSCS	Multi-Service Communication System
MSFCG	Manpower Systems Functional Coordination Group
MSFS	Maintenance Shop Floor System
MS-3	Manpower Staffing Standard System
MSTI	Manual SVIP/TRI-TAC Interface
MTDA	Modified Table of Distribution and Allowances
MTMC	Military Traffic Management Command
MTOE	Modification Table of Organization and Equipment
M&TS	Military and Technical Schools
MTST	Mobile TMDE Support Team
MTT	Materials Testing Technology
MTT	Mobile Training Team
MUL	Master Urgency List
MWO	Modification Work Order
MWOFP	Modification Work Orders Fielding Plan
MWR	Morale, Welfare and Recreation
MYP	Multiyear Procurement
MZAD	Mainz Army Depot
NAF	Nonappropriated Fund
NAGE	NATO Air Defense Group Environment
NAIF	Non-Army Industrial Fund
NAIRA	Nuclear Accident/Incident Response and Assistance
NAMSA	NATO Maintenance and Supply Activity

NATO	North Atlantic Treaty Organization
NAMSO	Nato Supply and Maintenance Organization
NATPATMO	NATO Patriot Management Office
NAVCON	Navigation/Control Systems
NAVMAT	Navy Material
NBC	Nuclear, Biological and Chemical
NC	Non Construction
NCAD	New Cumberland Army Depot
NCO	Non-Commissioned Officer
NDI	Non Developmental Item
NDP	National Disclosure Policy
NDT	Nondestructive Testing
NEPA	National Environmental Policy Act
NET	New Equipment Training
NETP	New Equipment Training Plan
NGMS	National Guard Military Schools
NIB	National Industries for the Blind
NIP	Nonconsumable Item Program
NISH	National Industries for the Severely Handicapped
NLAB	Natick Laboratories
NMCS	Not Mission Capable Due to Supply
NMI	Nautical Mile
NMI	Nuclear Metals, Inc.
NOSC	Naval Ocean Systems Command
NRDC	Natick Research and Development Center
NSA	National Security Agency
NSAP	Navy Science Assistance Program
NSG	North-Seeking Gyrocompass
NSIA	National Security Industrial Association
NSN	National Stock Number
NTC	National Training Center
NTI	New Thrust Initiative
NTMO	New Thrust Management Office
NUWAX	Nuclear Weapons Accident Exercise
NVD	Non-Violent Disablement
NVEOL	Night Vision and Electro-Optics Laboratory
NWC	Naval Weapons Center
NWE	Nuclear Weapons Effects
NWFDFS	Nuclear Weapon Field Data Feedback System
NWSSC	Naval Weapons Station/Successful Completion
NWSSC	Nuclear Weapons System Safety Committee
OAM	Office of Acquisition Management
OBCE	Operational Baseline Cost Estimate
OEDCNM	Office of the Executive Director for Chemical and Nuclear Matters
ODC	Office of Defense Cooperation

ODCSCNM	Office of the Deputy Chief of Staff for Chemical and Nuclear Matters
ODCSDEA	Office, Chief of Staff for Development, Engineering and Acquisition
ODCSLOG	Office of the Deputy Chief of Staff for Logistics
ODCSOPS	Office of the Deputy Chief of Staff for Operations
ODCSPER	Office of the Deputy Chief of Staff for Personnel
ODCSRDA	Office of the Deputy Chief of Staff for Research, Development and Acquisition
ODCSRM	Office of the Deputy Chief of Staff for Resources Management
ODCSSM	Office, Deputy Chief of Staff for Supply, Maintenance and Transportation
ODP	Officer Distribution Plan
OFF	Officer
OFT	Operational Feasibility Test
OJCS	Office of the Joint Chiefs of Staff
OJT	On the Job Training
O&M	Operations and Maintenance
OM	Operation Maintenance
OMA	Operations and Maintenance, Army
OMB	Office of Management and Budget
OOC	Out-of-Cycle
O&O	Operational and Organizational
OPA	Other Procurement Army
OPLAN	Operational Plan
OPM	Office of the Program Manager
OPMS	Officer Personnel Management System
OPMNUC	Office of the Project Manager for Nuclear Munitions
OPTADS	Operations Tactical Data System
OPR	Office of Primary Responsibility
ORDA	US Army Depot Activity Ober-Ramstadt
ORSA	Operations Research Systems Analysis
O&S	Operating and Support
OSD	Office of the Secretary of Defense
OSD PIF	Operating Strength Deviation Productivity Investment Funding
OSDV	Operating Strength Deviation
OSHA	Occupational Safety and Health Act
OST	Order Ship Time
OT	Operational Testing
OT II	Operational Test II
OTEA	Operational Test and Evaluation Agency
OTS	Off-the-Shelf
OUTS	Operational Unit Transportable System
PI	Program Integration
PIa	Pershing Ia
PII	Pershing II

PA	Procurement Appropriation
P&A	Price and Availability
PAA	Procurement Appropriation, Army
PAD	POMCUS Authorization Document
PADS	Position and Azimuth Determining Systems
PAOC	Pollution Abatement Operations Center
PARR	Program Analysis and Resource Review
PAS	Price, Availability and Serviceability
PBAC	Program Budget Advisory Committee
PBAS	Program Budget Accounting System
PBFCG	Program and Budget Functional Coordination Group
PBD	Program Budget Decision
PBG	Program Budget Guidance
PBX	Plastic Bonded Explosive
PCA	Physical Configuration Audit
PCB	Printer Circuit Boards
PCB	Polychlorinated Biphenyl
PCCS	Program Cost Control System
PCPC	Productivity Center Planning Committee
PCS	Permanent Change of Station
PDIP	Program Decision Increment Package
PEP	Producibility Engineering Planning
PDIP	Program Decision Increment Package
PDIR	Program Development Implement Package
PDO	Property Disposal Officer
PDL	Program Design Language
PECIP	Productivity Enhancing Capital Investment Program
PEP	Producibility, Engineering and Planning
PET	Preventive Environmental Technology
PETS	Pin Electronics Test System
PGS	Productivity Gain Sharing
PHS	Petroleum Hoseline System
PIF	Productivity Investment Fund
PIL	Preferred Items List
PIP	Product Improvement Program
PIPE	Physical Inventory Program Enhancement
PIT	Product Improvement Testing
PIVADS	Product Improved Vulcan Air Defense System
PIU	Programmable Interface Unit
PJHI	PLRS/JTIDS Hybrid Interface
PJS	PLRS/JTIDS System
PJSM	Plan Job Scheduling Model
PKO	Peacekeeping Operations
PLATO	Personalized Learning and Training Opportunities
PLL	Prescribed Load List
PLRS	Position Location Reporting System
PLRIS/TIDS	Position Location Reporting System/Tactical Information Distribution System

PM	Product Management
PM AAH	Project Manager Advanced Attack Helicopter
PMAG	Program Manager Advisory Group
PM-AMS(R)	Project Manager, for Army Management Structure
PM,ATSS	Product Manager, Automatic Test Support Systems Redesign
PMJEG	Performance Measurement Joint Executive Group
PMCS	Project Management Control System
PM, LOTA	PM, Low Observable Technology and Application
PMP	Program Management Plan
PMMP	Project Manager's Master Plan
PM PBAS	PM for Budget Accounting System
PMR	Program Management Review
PMRS	Performance Management and Recognition System
PMSA	Project Manager Materiel System Assessment
PM, SANG	PM, Saudi Arabian National Guard
PMSC	Preventive Maintenance and Checks and Balances
PM STANFINS	PM for Standard Financial Systems
PMTF	Protective Mask Task Force
PM TMDE	Program Manager for Test, Measurement and Diagnostic Equipment
PM TPS	Product Manager, Test Program Sets
PM TRADE	Project Manager Training Devices
PNVS	Pilot Night Vision Sensor
POC	Point of Contact
POD	Plans and Operations Division
POG	Project Officers' Group
POI	Program of Instruction
POL	Petroleum, Oils, and Lubricants
POM	Program Objective Memorandum
POMCUS	Prepositioning of Materiel Configured in Unit Sets
POP	Performed Oriented Packaging
POP	Pipeline Outfit, Petroleum
PPBS	Planning, Programming and Budgeting System
PPBES	Planning, Programming, Budgeting and Execution System
PPL	Programed Priority List
PPP	Package Processing Point
P^3I	Preplanned Product Improvement
PQT-C	Prototype Qualification Test - Contractor
PQT-G	Prototype Qualification Test - Government
P&R	Planning and Review
PRAY	Production Reliability Acceptance Testing
PRB	Performance Review Board
PRIDE	Productivity Required Improvements in the Decade of the Eighties
PRIM	Partially Restrained Internal Member
PRON	Procurement Request Order Number
PRR	Procurement Requirement and Review

PRR	Production Readiness Review
PSA	Personnel Support Agency
PSCC	Packing, Storage, and Containerization Center
PSCT	Product Specification Component Testing
PSE	Physical Security Equipment
PSNAP	PLRS Steerable Null Antenna Processor
PTFD	Personnel, Training and Force Development
PTP	Part-Time Permanent
PUL	Preconfigured Unit Load
PVT-C	Production Verification Test - Contractor
PWD	Procurement Work Directive
PWRMS	Prepositioned War Reserve Materiel Stock
Q	Quarter
QAR	Quality Assurance Review
QAT	Quality Assurance Teams
QC	Quality Circles
QDR/EIR	Quality Deficiency Reports/Equipment Improvement Recommendations
QM	Quartermaster
QQPRI	Qualitative and Quantitative Personnel Requirements
QRIP	Quick Return on Investment Program
QRP	Quick Reaction Procurement
QWG/PIQA	Quadripartite Working Group on Proofing, Inspection and Quality Assurance
R&A	Review and Analysis
RAC	Resource Action Committee
RAC	Reliability Analysis Center
RAM	Reliability, Availability and Maintainability
RAM-D	Reliability, Availability, Maintainability - Durability
RAP	Rocket Assist Projectile
RAPIDS	Rapid Army Priority Item Distribution System
RAS	Remote Area Support
RASA	Redstone Arsenal Support Activity
RATE	Retention and Transfer Enhancement
RBL	Recommended Buy List
RCM	Reliability Centered Maintenance
RCRA	Resource Conservation and Recovery Act
RCS	Reporter Control System
RDA	Research, Development and Acquisition
RDE	Research, Development and Engineering
RDF	Rapid Deployment Force
RDF-A	Rapid Deployment Force - Army
RDTE	Research, Development, Test and Evaluation
RDTEA	Research, Development, Test and Evaluation Activities
RDX	Research Development Explosive

REARM	Renovation of Armament Manufacturing
RECS	Rear Echelon COMINT System
REMBASS	Remotely Monitored Battlefield Sensor System
REP	Request for Proposal
REQ VAL	Requisition Validation
RESHAPE	Resource Self-Help Affordability Planning Effort
RETS	Remote Target System
RETS/AMTC	Remote Target System/Armor Moving Target Carrier
RFP	Request for Proposal
RFPT	Roland Field Proficiency Trainer
RIA	Rock Island Arsenal
RIDB	Readiness Integrated Data Base
RISE	RAM Improvement of Selected Equipment
RITS	Roland Institutional Trainers
RJAF	Royal Jordanian Air Force
RMA	Rocky Mountain Arsenal
RMD	Resource Management Division
RMEW	Resource Management Executive Workshops
RMES	Resource Management Evaluation Surveys
RM^3	Remote Multi-Media Mode
RMP	Reprogrammable Micro-Processor
RMSRC	Resource Management Systems Review Committee
ROC	Required Operational Capability
ROD	Report of Discrepancy
ROKA	Republic of Korea Army
ROKIT	Republic of Korea Indigenous Tank
ROM	Read Only Memory
ROPS	Roll Over Protective Structures
ROWPU	Reverse Osmosis Water Purification Unit
RPSTS	Repair Parts and Special Tools
RPV	Remotely Piloted Vehicle
RPV/SADARM	Remotely Piloted Vehicle/Sense and Destroy Armor
RRAD	Red River Army Depot
RSAF	Royal Saudi Air Force
RSI	Rationalization, Standardization, and Interoperability
RSOP	Reconnaissance Selection and Occupation of Position
RTD	Replacement Training Detachment
RTL	Research and Technology Laboratory
RVT	Reliability Verification Testing
SA	Security Assistance
SA^3	Security Assistance Automation, Army
SAAC	Security Assistance Accounting Center
SAAD	Sacramento Army Depot
SAC	Strategic Air Command
SADARM	Sense and Destroy Armor
SADFAN	Security Assistance Dedicated Facsimile Network
SADM	Special Atomic Demolition Munition

SAFS	Safing, Arming and Fusing System
SAG	Study Advisory Group
SAIL	Special Application Items List
SAILS	Standard Army Intermediate Level Supply System
SALCS	Saudi Arabian Logistics Control System
SALF	Saudi Arabian Land Forces
SALFAAP	Saudi Arabian Land Forces Army Aviation Program
SAMA	Saudi Arabian Monetary Agency
SAMPAN	System for Automation of Materiel Plans for Army Materiel
SAMS	Standard Army Maintenance System
SANG	Saudi Arabian National Guard
SANGTEP	Saudi Arabian National Guard Training and Evaluation Program
SAO	Systems Analysis Offices
SAR	Selected Activities Report
SASC	Senate Armed Services Committee
SATCOMA	US Army Satellite Communication Agency
SASDIM	Security Affairs Support Directorate for Information Management
SATFA	Security Assistance Training Field Activity
SAW	Squad Automatic Weapon
SAWE	Simulated Area Weapons Effect
SBA	Small Business Act
SBIR	Small Business Innovative Research Program
SCCR	Supplemental Contractor Cost Report
SCCS-R	Single Channel Collection Station - Rear
SCOTT	Single Channel Objective Tactical Terminal
SCTS	System Components Test Station
SCM	Self-Contained Munitions
SDAF	Special Defense Acquisition Fund
SDC	Sample Data Collection
SDPI	System Decision Paper I
SDSC	Software Development and Support Center
S&E	Scientific and Engineering
SEAD	Seneca Army Depot
SEAD	Suppression of Enemy Air Defense
SECDEF	Secretary of Defense
SECOMO	Software Engineering Cost Model
SEE	Small Emplacement Excavator
SELPO	Secure Electronics Procurement Office
SEMA	Special Electronic Mission Aircraft
SEOS	SIGINT/EW Operator Simulator
SES	Senior Executive Service
SESAME	Selected Essential-Item for Availability Method
SES4WAR	Selected Essential Item Stockage for Availability Method for War
SHAD	Sharpe Army Depot

SHORAD	Short-Range Air Defense
SHORAD C2	Short Range Defense Command and Control
SHP	Shaft Horse Power
SIDPERS	Standard Installation/Division Personnel System
SIGINT/EW	Signal Intelligence/Electronic Warfare
SILT	Stockpile Integrated Laboratory Tests
SINCGARS	Single Channel Ground and Airborne Radio Subsystem
SKO	Sets, Kits and Outfits
SLAC	Support List Allowance Card
SLAR	Side Looking Airborne Radar
SLASC	US Army St. Louis Area Support Center
SLEP	Service Life Extension Program
SLM	Silhouette Layout Mats
SLRP	Strategic Long Range Plan
SLRP	Strategic Long Range Planning
SMA	Subject Matter Assessments
SMART	Supply and Maintenance Assessment and Review Team
SMCA	Single Manager for Conventional Ammunition
SMCO	Supply Maintenance Control Officer
SMCP	Supply and Maintenance Control Point
SMT	Supply, Maintenance and Transportation
SMI	Soldier-Machine Interface
SNT	Serial Number Tracking
SOA	Statement of Accord
SOC	Special Operations Center
SOF	Support of Operations Forces
SOI	Surety and Operational Inspection
SOP	Standing Operating Procedure
SOQAS	Statement of Quality and Support
SORR	System Operational Readiness Review
SOTAS	Stand-Off Target Acquisition/Attack System
SOUTHCOM	US Army Southern Command
SOW	Statement of Work
SPA	Special Priorities System
SPAF	Sudanese Peoples Armed Forces
SPAL	Simulator, Projectile Airburst Liquid
SPIF	Single Process-Integrated Files
SPLL	Self-Propelled Launcher/Loader
SPRINT	Spare Parts Review Initiatives
SQI	Skill Qualification Identifier
SQT	Skill Qualification Test
SQT	Software Qualification Test
SRA	Separate Reporting Activity
SSA	Security Support Activity
SSA	Service Support Activity
SSA	Supply Support Arrangements
SSBO	System Support Buy-Out
SSEB	Source Selection Evaluation Board

SSEIP	Special Stockpile Engineering Investigation Program
SSI	Specialty Skill Identifier
SSMA	Spread Spectrum Multiple Access
SSN	Standard Stock Number
SSSA	Staffing Standards Support Activity
STAGS	Simulated Tank Anti-Armor Gunnery System
STANAG	Standardization Agreement
STE	Simplified Test Equipment
STE/ICE	Simplified Test Equipment for Internal Combustion Engine
STE-X	Simplified Test Equipment - Expandable
STS	Systems Technical Support
STTE	Special Tools and Test Equipment
SUH	Start-Up Handoff
SUSV	Small Unit Support Vehicle
SVGC	Secure Voice Graphic Conferencing
SVIP	Secure Voice Improvement Program
SWHQ	Static War Headquarters
SWL	Signals Warfare Laboratory
TAA	Total Acquisition Authority
TAA	Total Army Analysis
TAADS	The Army Authorization Document System
TAAP	The Army Apprenticeship Program
TAC	Tank Agency Checks
TACCS	Tactical Army Combat Service Support System
TACFIRE	Tactical Fire Direction System
TACMIS	Tactical Management Information System
TACOM	US Army Tank-Automotive Command
TADS	Target Acquisition Designation Sight
TADS/PNVS	Tactical Acquisition Designation System/Pilot Night Vision System
TAEDP	Total Army Equipment Distribution Program
TAFT	Technical Assistance Field Team
TAG	Technical Advisory Group
TAG	The Adjutant General
TALWOG	Technical and Logistics Work Group
TAMMS	The Army Maintenance Management System
TAP	The Army Plan
TARADCOM	US Army Tank-Automotive Research and Development Command
TARCOM	US Army Tank-Automotive Material Readiness Command
TARP	Theater Army Repair Program
TAT	Technical Assistance Team
TB	Technical Bulletin
TC	Type Classification
TCA	Tactical Cryptological Program
TCAC	Tactical Control and Analysis Center

TCATA	TRADOC Combined Arms Test Activity
TCC	Technology Cooperation Committee
TCC	Telecommunications Center
TC-LP	Type Classification-Limited Production
TCN	Territorial Command Network
TCN	Third Country National
TDA	Table of Distribution and Allowances
TD/CMS	Technical Data/Configuration Management System
TDMA	Time Division Multiple Access
TDP	Technical Data Package
TDP	Technical Development Plan
TDS	Turret Drive System
TEAD	Toole Army Depot
TECOM	US Army Test and Evaluation Command
TELMOD	Telephone Modernization
TEMIS	TMDE Management Information System
TEMOD	Test Equipment Modernization
TEMPER	Tent, Extendable, Modular, Personnel
TFP	Transportability Focal Point
TGW	Terminal Guidance Warhead
THE	Transportable Helicopter Enclosure
TIMS	Technical Information Management System
TIWG	Test Integration Working Group
TLD	Thermoluminescent Dosimetry
TM	Technical Manual
TMAS	Tank Main Armament Systems
TMDE	Test Measurement and Diagnostic Equipment
TOA	Total Obligation Authority
TOAD	Tobyhanna Army Depot
TOCAM	The Optimum Cost Avoidance Methodology
TOE	Table of Organization and Equipment
TOMT	Turret Organizational Maintenance Trainer
TOPS	TACOM Order Placement System
TOW	Tube-Launched, Optically-Tracked, Wire-Guided
TPA	Total Package Approval
TPFDL	Time Phased Force Development List
TPS	Test Program Set
TPSIS	TPS Information System
TP/UMF	Total Package/Unit Materiel Fielding
TRACE-P	Total Risk Assessing Cost Estimate for Production
TRACS	TACOM Reporting Acquisition Control System
TRACS	TMDE Recall and Control System
TRADE	Training Devices
TRADOC	US Army Training and Doctrine Command
TRE	Transient Radiation Effects
TROSCOM	US Army Troop Support Command
TRW	Thompson, Rams, Wooldridge, Inc.
TSADS	Tri-Service Access Delay System

TSAM	Test Support Analysis Model
TSARCOM	US Army Troop Support and Aviation Materiel Readiness Command
TSC	TMDE Support Center
TSCA	Toxic Substances Control Act
TSCD	Targeting Station Control and Display
TSG	The Army Surgeon General
TSIR	Test Set Incident Report
TSO	TMDE Support Operation
TSTS	Thermal System Test Set
TSWG	Training Support Work Group
TTS	Tank Thermal Sight
T_2SS	TOW and Improved TOW Sub-Systems
TWG	Technical Working Group
TWGSS	Tank Weapons Gunnery Simulator System
TWI	Training With Industry
TWVCSA	Tactical Wheeled Vehicle Central Staging Activity
TWVULDP	Tactical Wheeled Vehicle Useful Life Developmental Program
U-COFT	Unit Conduct of Fire Trainer
UCR	Unit Cost Reports
UDRE	Under Secretary of Defense for Research and Engineering
UF4	Green Salt
UF6	Uranium Hexafloride
UIC	Unit Identification Code
UICIO	Unit Identification Code Information Officer
UMAD	Umatilla Army Depot
UMMCA	Unspecified Minor MCA
UNITREP	Unit Reporting System
UPC	Universal Product Code
UPE	Universal Pin Electronics
USAAHS	US Army Academy of Health Science
USAAPGISA	US Army Aberdeen Proving Ground Installation Support Activity
USACC	US Army Communications Command
USACSTA	US Army Combat Systems Test Activity
USACTA	US Army Central TMDE Activity
USACEEIA	US Army Communications-Electronics Engineering Installation Agency
USACSA	US Army Communications Systems Agency
USACTA	US Army Central TMDE Activity
USADACS	US Army Defense Ammunition Center and School
USAF	US Air Force
USAFAC	US Army Finance and Accounting Center
USAHTTBMSA	US Army High Technology Test Bed Materiel Support Activity

USAIS	US Army Intelligence School
USAISC	US Army Information Systems Command
USAMICOM	US Army Missile Command
USAOTEA	US Army Operational Test and Evaluation Agency
USAREIM	US Army Research Institute for Environmental Medicine
USAREUR	US Army Europe
USARJ	US Army Japan
USASAC	US Army Security Assistance Center
USATHAMA	US Army Toxic and Hazardous Materiel Agency
USATSAC	US Army TMDE Support Activity - CONUS
USATSG	US Army TMDE Support Group
USCENCOM	US Central Command
USCINCCENT	US Commander-in-Chief Central Command
USCINCLANT	US Commander-in-Chief Atlantic
USCINCSO	US Commander-in-Chief Southern Command
USEUCOM	US European Command
USFJ	US Forces Japan
USG	United States Government
USMC	US Marine Corps
USMTF	US Message Text Formed
USMTM	US Military Training Mission
USN	US Navy
USPS	US Postal Service
V	Volt
VCSA	Vice Chief of Staff, Army
VDT	Video Display Terminal
VE	Value Engineering
VFDMIS	Vertical Force Development Management Information System
VHSIC	Very High Speed Integration Circuit
VIP	Very Important Person
VIS	Vehicular Intercommunication System
VISTA	Very Intelligent Surveillance Target Acquisition
VLSI	Very Large Scale Integration
VM	Virtual Machine
VSCDP	Visual System Component Development Program
VTAADS	Vertical, The Army Authorization Documents System
WADF	Western Area Demilitarization Facility
WADS	Weapon Access Delay System
WARCO	Warranty Control Office
WEP	War Emergency Plan
WESTCOM	US Western Command
WHS	Warhead Systems
WO	Warrant Officer
WORCS	Work Ordering and Reporting Communications System
WRAP	War Reserve Automated Process

WRSA	War Reserve Stock Allies
WSMAT	Weapon Systems Management Team
WSMR	White Sands Missile Range
WSSM	Weapon Systems Staff Manager
WWMCCS	Worldwide Military Command and Control System
ZBB	Zero Base Budgeting

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Admin Officer	MR. W. STEPHENS	8N11	49643	AMCSM-SOP
Plans & Projects Div	COL D. SAARI	8S44	49445	AMCSM-SP
Automated Systems Div	MR. G. PELLED	9S18	48345	AMCSM-SA
Maint Interservice Spt Mgt Ofc	MR. J. L. LOWMAN	8S49	49397	AMCSM-SI
Asst Dep CofS for Weapon Systems Mgt	MR. L. D. SCHEUBLE (Act)	8W18	49801	AMCSM-W
Res & Sys Int Div	COL R. J. SUHOSKY	8W16	49801	AMCSM-WR
Aviation & Missile Div	COL G. E. LETHCOE, JR.	7N28	48806	AMCSM-WA
Ground Combat & Munitions Systems Div	COL D. HITE	7N16	45544	AMCSM-WG
Cmd Control & Survl Spt Systems Div	COL L. LEASSEAR	7N38	48787	AMCSM-WC
Systems Integration Div	MAJ T. R. PRICKETT	8N08	49785	AMCSM-WI
Asst Dep CofS for Policy & Procedures	MR. J. FLOYD	8W18	49800	AMCSM-P
Supply Div	COL H. BROOKS	8S08	49271	AMCSM-PS
ILS Policy & Data Mgt Div	COL M. E. PERRY	5N42	49759	AMCSM-PL
Maintenance Div	COL J. BEST	8S28	48786	AMCSM-PM
Mod Mgt Div	COL L. P. HORTON	8S15	49436	AMCSM-PF

MISCELLANEOUS NUMBERS
(See AMC-M 10-1 for Services not listed)

Ambulance	1S51	9/911	
(During Duty Hours-Call Clinic)		48296	
(After Duty Hours-Call Guard)		9-577-1144	
AMC Education Center	4S17	48484	ANPE-HRE-H
AMC Operations Center (SDO)	G2C60	48586	AMCOC
Audio Visual Aids	1N57	46914	AMCEN-OA-A
Automation Security Ofc	4N29	45588	AMXLS-LMR
Battlefield Electromagnetic Environment Ofc	G1C02	48515	AMSTE-CT-CE
Bldg Admin, OSD	1S34	48099	OSD
Civilian Emp Health Svc (Clinic)	1S51	48296	
Classified Mailroom	G2W07	49585	AMCAG-AH-M
Conference Room Scheduling	1N57	48485	AMCEN-OA-A
Correspondence/Mail Distribution	G2W07	49594	AMCAG-AH-M
Credit Union	Lobby	48311	
Data Communications Services	G3C08	49000	ASNC-BHA
Driver Service	G1S01	48091	AMCEN-OT
Exec Dining Facility	10N53	49569	AMCGS-GM
Forms Management Officer, HQ	G3C25	48060	AMCAG-AP-DE-F
Graphics	1N27	48490	AMCEN-OA-G
Graphics Self-Service	1C22	48481	AMCEN-OA-G
Guard Office	Lobby	9-557-1144	
Learning Resource Center (LRC)	1S17	48214	AMCPE-TD-LRC
Library (Reference/Loan Publications)	7S35	45816	AMCDMA-ML
Library (Technical)	7S35	48152	AMCDMA-ML
Locator Service (Mil Pers)	1E06	48151	AMCPE-MH
Locator Service (Civ Pers)	2C33	49491	AMCPE-CH-TS
Message Center	G3C20	49009	ASNC-BHA-O
Nurse	1S51	48296	
Parking Tickets/Towing (PMI)	Lobby	823-3255	
Photographic Facility	1C44	48486	USA-AVC
Postal Operations Section	G2W07	48693	AMCAG-AH-M
Printing & Duplication	G2C37	49603	AMCAG-AH-P
Protocol Ofc	10S50	47853	AMCGS-P
Publications Control Officer, HQ	G3C25	48158	AMCAG-AP-DE
Editorial Section	G3C25	48060	AMCAG-AP-DE
Publications/Blank Forms Stockroom	G3C19	49663	AMCAG-AP-DES
Receptionist	Lobby	49191	
Records ADP/MGT	G3C08	45258	AMCAG-AH-A
Reservations & Tickets (Official)	1E19	48108	USA-SCAF
Secure Voice Services	G3C20	49014	ASNC-BHA
Security Office, HQ	1N58	49141	AMCPE-SH
Special Security Command AMC	G2C63	48986	IASSG-AMC
Spell Memorial Conference Room	10N56	48988	AMCGS-PA
Supply Stockroom (GSA)	G2C31	45885	DSS-W
Telecommunications Center (MSG)	G3C24	49010	ASNC-BHA-O
Telephone Communications Services	G3W18	49000	AISC-BUSH HILL
Top Secret Repository	G2W09	49590	AMCAG-AH-R
Travel CONUS	1S50	49006	AMCAG-AH-T
Travel OCONUS	1S46	48116	AMCAG-AH-T
Unclassified Mailroom	G2W07	49595	AMCAG-AH-M
USA Equip Auth Rev Actv		AV356-2608	AMXEA-C
USA Special Proj Spt Actv	7W06	45480	AMXSO
USA SPSA Ft. Bragg LNO		AV236-2539	AMXSO-L
USA DARISSA Lakehurst		AV624-7688	AMXSO-S
USAISC-Bush Hill	G3C08	48061	ANSC-BHA
Westwood Mgt Ofc (Bldg Mgt)	Lobby	751-5590	

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Program Budget & Funding Policy Div	VACANT	3S50	49110	AMCRM-PP
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ADCS-Civ Pers	MR. A. GRIMMETT	2N30	49415	AMCPE-C
HQ CPO	MR. R. BROOKS	2S24	49427	AMCPE-CH
Military Pers	COL R. NITZSCHE	2S56	49325	AMCPE-M
HQ Mil Pers Ofc	CPT G. NIESS	1E06	48150	AMCPE-MH
Cmd Reenl Ofc	SGM C. KILGORE	2S44	49103	AMCPE-ME
Adjutant General	COL V. CAMPBELL	1N12	48520	AMCAG
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Admin Sys Div	MR. E. NAZZARO (Act)	G2C08	45259	AMCAG-A
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Installations & Services Activity, Rock Island, IL AV 793-5018	COL J. C. STAEHLER			AMXEN

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Mat Rdn Sys Div	MR. W. J. FERRARI	4N52	49140	AMCIM-E
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OE Staff Officer	MR. R. A. KLAUS	1N20	48536	AMCOE
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OE Staff Officer	MR. L. F. BASS	1N20	48536	AMCOE
Ops Rsch Analysis	DR. W. L. WOODSMALL	1N20	48536	AMCOE

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Systems Inspection Div	COL D. W. MOE	Ft Blv-664-6511		AMXIG-S
Logistics Inspection Div	COL J. L. BENNETT	Ft Blv-664-6611		AMXIG-L

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Army RDA Magazine	LTC D. G. KIRKPATRICK	8S57	48978	AMCDE-XM
Opns & Spt Div	LTC W. B. WEST	8N55	48537	AMCDE-O
Admin Officer	MS. B. Y. HEARN	8N47	48028	AMCDE-OP
Dep CofS-Sys Mgt	MR. A. V. CAMPI	8N54	49850	AMCDE-S
Health Haz Assess Ofc	MAJ W. T. BROADWATER	8N54	49851	AMCDE-S
Avn Sys Div	COL J. S. DAVIS	8N28	48118	AMCDE-SA
Msl & AD Sys Div	COL A. F. GLEIM	8N31	49651	AMCDE-SD
Gnd Cbt Sys Div	COL P. L. YEATS	8N48	49870	AMCDE-SG
Spt Sys Div	COL G. H. HEATH	8N14	49628	AMCDE-SS
Mun Sys Div	COL J. F. SALMON	8N42	48604	AMCDE-SM
CCC & Survl Div	COL H. L. PATRICK	9C32	49295	AMCDE-SC
Bttfld Auto Mgt Div	COL H. R. ARCHIBALD	9N23	49318	AMCDE-SB
SGT York Spec Opns	MR. S. V. BALINT	G2C44	49576	AMCDE-SY
Asst Dep CofS-Prog Mgt	MR. R. D. GREENE	8E14	49848	AMCDE-P
RDTE Pgm Bud Con	COL G. W. ROSTINE	8E14	49860	AMCDE-PB
Auto Info Div	COL W. R. PETERS	8N23	45872	AMCDE-PA
Pgm Integ Div	COL J. G. LAND	3W14	49200	AMCDE-PI
Asst Dep CofS-Acq Mgt	VACANT	8N22	49811	AMCDE-A
Acq Assess & Pol Div	COL J. N. TRAGESSER	8N22	49811	AMCDE-AA
Eng & Prod Perf Eval Div	MR. A. H. NORDSTROM	9S37	48333	AMCDE-AC

DEPUTY CHIEF OF STAFF FOR INTELLIGENCE — AMCMI

Dep CofS	**COL B. H. DAVIS**	**1E14**	**48134**	**AMCMI**
Dep to Dep CofS for Fgn Intel	MR. C. H. HOWELL	1E14	48134	AMCMI-F
Fgn Intel Spt Div	VACANT	1E14	48134	AMCMI-FS
Fgn Intel Rqmts & Prod Mgt Div	MR. R. V. MILES	1E14	48134	AMCMI-FR
Asst Dep CofS for Security	LTC S. R. HARRIS	1E14	48134	AMCMI-S
Security Div	MR. B. KUTCH	1E22	49066	AMCMI-SS
Tech Loss Control Div	MR. D. PORTER	1E22	49066	AMCMI-ST
Special Progs Div	MR. R. E. SIMAK	1E14	48134	AMCMI-SP
Foreign Disclosure Ofc	MRS. M. WITT	Ft Gillem, GA Z 30050-5000	AV 797-5543	AMCMI-SF

DEPUTY CHIEF OF STAFF FOR INTERNATIONAL PROGRAMS — AMCIP

Dep CofS	**MR. B. R. DUNETZ**	**9W14**	**48367**	**AMCIP**
Asst Dep CofS	COL B. P. MANDERVILLE, JR.	9W14	48367	AMCIP
Canada & Europe Div	MR. R. C. COOK	9W14	48367	AMCIP-E
North Atlantic	MR. M. P. ZAPF	9W14	48367	AMCIP-EN
Central Europe	LTC W. G. GILLESPIE	9W14	48367	AMCIP-EC
Southern Europe	LTC W. G. GILLESPIE	9W14	48367	AMCIP-ES
Mid/FE & So Hemi Div	MR. R. J. FACEY	9S15	48231	AMCIP-M
Middle East/Africa	MR. R. H. SCHLEGEL	9S15	48231	AMCIP-M
Asia/Pac/Lat Amer	MR. B. W. GILLETTE	9S15	48231	AMCIP-M
Pol Prog Std Agr Div	MR. M. Y. HARVEY (Act)	9W15	48554	AMCIP-P
Multi Lat Stdz	MR. M. Y. HARVEY	9W15	48554	AMCIP-P
Pol/Plans & Prog	MR. E. B. HOLLEY	9W15	48554	AMCIP-P
Commanders				
USARDSG-UK	COL C. A. HODDER	COMM	44-1-402-7185/7282	
USARDSG-GE	COL. J. N. BERTELKAMP	COMM	49-228-339-2732/2721	
USARDSG-CA	COL C. G. RAMSEY	AV	627-8284	
USARDSG-AS	LTC H. E. WARVARI	COMM	61-62-653943	
NATO (MAS)	COL J. J. HEINLEIN, JR.	COMM	32-2-513-3830	

DEPUTY CHIEF OF STAFF FOR TECHNOLOGY PLANNING & MANAGEMENT — AMCLD

Dep CofS	**MR. R. VITALLI**	**10N24**	**49561**	**AMCLD**
Asst Dep CofS	DR. GIESKE	10N24	49561	AMCLD
AMCCOM	DR. I. BARTKY	10N30	49565	AMCLD
AVSCOM	DR. W. COLLINGS	10N25	48220	AMCLD
New Thrusts/Demo	LTC J. ALEXANDER	10N24	49565	AMCLD
BRDC	DR. R. ODOM	10N33	49579	AMCLD
MICOM/NLABS	DR. R. GONANO	10N30	49565	AMCLD
ARO/AMMRC/HEL	DR. L. HAGAN	10N30	49565	AMCLD
TACOM/TECOM	DR. T. SMALL	10N33	48220	AMCLD
CECOM	MR. PREDHAM	10N33	48372	AMCLD
ERADCOM/PM TRADE	DR. J. STEKERT	10N25	49566	AMCLD
IR&D Manager	DR. K. BASTRESS	10N09	48671	AMCLD
Prog Int/ADEA	VACANT	10N25	49565	AMCLD
Long Range Planning	MR. B. BARTHOLOW	10N33	48372	AMCLD
Tech Transfer	MR. J. KOLB	10N09	48671	AMCLD
Tri-Svc Ind Info Ctr Army/Navy/Air Force	MRS. D. MAHON	8S58	48940	AMCLD

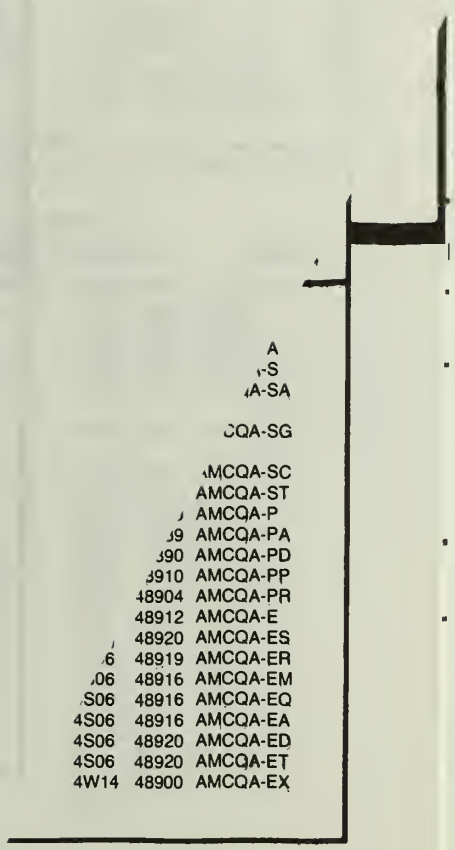
DEPUTY CHIEF OF STAFF FOR CHEMICAL AND NUCLEAR MATTERS — AMCCN

Dep CofS	**COL P. SZWARCKOP (Act)**	**10W16**	**49620**	**AMCCN**
Executive Officer	LTC D. H. BROWN	10W16	49015	AMCCN-X
Chief, Chemical Div	LTC(P) R. H. TIMPF	10C09	49463	AMCCN-C
Chief, Nuclear Div	COL P. SZWARCKOP	10W18	45550	AMCCN-N

SANG MODERNIZATION PROGRAM

BG P. R. SCHWARTZ, PM	**5S32**	**49126**	**AMCPM-NG**
LTC R. S. LOWER, Chief, Wash Ofc	5S32	49126	AMCPM-NGW

Staff Duty Officer — Rm G2C60
Autovon 284-9223
Commerical 202-274-9223
Operations Center: Administrative: 274-8586/7
Emergency: 274-8660


A
-S
A-SA
CQA-SG
MCQA-SC
AMCQA-ST
AMCQA-P
9 AMCQA-PA
90 AMCQA-PD
3910 AMCQA-PP
48904 AMCQA-PR
48912 AMCQA-E
48920 AMCQA-ES
6 48919 AMCQA-ER
06 48916 AMCQA-EM
S06 48916 AMCQA-EQ
4S06 48916 AMCQA-EA
4S06 48920 AMCQA-ED
4S06 48920 AMCQA-ET
4W14 48900 AMCQA-EX

15 SEPTEMBER 1985
STAFF DIRECTORY
THIS IS NOT AN OFFICIAL ORGANIZATIONAL CHART

HEADQUARTERS UNITED STATES ARMY MATERIEL COMMAND

5001 EISENHOWER AVE., ALEXANDRIA, VA 22333-0001

COMMANDING GENERAL

COMMANDING GENERAL	GEN RICHARD H. THOMPSON	10E08	49625	AMCCG
Deputy CG for Research, Development and Acquisition	LTG R. L. MOORE	10N06	49705	AMCDRA
Deputy CG for Materiel Readiness	LTG L. F. SKIBBIE	10S06	49700	AMCDMR
Deputy for Management and Analysis	MS M. B. ACTON	10E20	49640	AMCDMA
Chief of Staff	MG J. D. ROSS	10E14	49637	AMCCS
Asst Chief of Staff	COL B. R. CLARK	10E14	49639	AMCACS

OFFICE OF DEPUTY CG FOR MATERIEL READINESS — AMCDMR

Asst Dep for MR	MR E. GREINER	10S06	49701	AMCDMR
Executive Officer	COL R. SZYDLO	10S06	49702	AMCDMR
Asst Exec Officer	LTC(P) E. LIPINSKI	10S10	48895	AMCDMR-TG
Asst Exec Officer	MR S. RANDOL	10S10	48895	AMCDMR-TG
Asst Exec Officer	MAJ W. PAINI	10S10	48895	AMCDMR-TG
Asst Exec Officer	MAJ G. POTTS	10S10	48895	AMCDMR-TG

EXECUTIVE DIRECTOR FOR TEST MEASUREMENT DIAGNOSTIC EQUIPMENT (TMDE) — AMCTM

Executive Director	LTG L. F. SKIBBIE	10S06	49700	AMCTM
Deputy Executive Dir	MR R. DUBOIS (Act)	1S24	48084	AMCTM
Executive Officer	VACANT	1S24	48085	AMCTM
Administrative Officer	MS B. QUACKENBUSH	1S24	48090	AMCTM
Engineering Mgt Div	MR P. CHEN (Act)	1S28	48096	AMCTM-E
Resources and Support Div	MR R. ERBER	1S24	48095	AMCTM-S

EXECUTIVE DIRECTOR FOR CONVENTIONAL AMMUNITION — AMXED

Executive Director	LTG L. F. SKIBBIE	10S06	49700	AMXED
Deputy Executive Director	BG G. P. BOWEN	7S04	49540	AMXED-D
Executive Officer	CPT(P) D. R. REIDENBACH	7S04	49540	AMXED-D
Admin Officer	MRS P. HONAKER	7W20	49543	AMXED-D
Rqmts, Plans, Prog Div	COL W. M. THOMPSON (USAF)	7S04	45620	AMXED-RP
Acq Log Div	CAPT A. G. CAMPBELL (USN)	7S04	49550	AMXED-AL

HQ AMC-EUROPE — AMXEU

Seckenheim, Germany, APO NY 09333-4747

Commander	BG H. D. WALKER	Mannheim Mil 8134
Deputy Commander	MR J. L. LOWMAN	Mannheim Mil 7207
LOG Plans & Policy	COL L. NELSON	Mannheim Mil 7431
Force MOD/ILS	COL A. SWISHER	Mannheim Mil 6795
LOG Assistance	COL W. PIFF	Mannheim Mil 6594
Dir for Resources	MRS J. WASKO	Mannheim Mil 6194
AMC-EUR Liaison Office	MRS M. QUACKENBUSH	4N08 49647 AMXEU-E

SECRETARY OF THE GENERAL STAFF — AMCGS

Secy General Staff	LTC A. L. MITCHELL	10S60	49644	AMCGS
Dep Secy Gen Staff	MAJ K. F. STEGGEMAN	10S60	49644	AMCGS
Dep Secy Gen Staff	VACANT	10S54	49665	AMCGS
Staff Action Control Off	MAJ R. L. ADAMS	10S54	49645	AMCGS
Staff Action Control Off	CPT B. J. ROSSOW	10S54	49646	AMCGS
Staff Action Control Off	CPT G. GORDON	10S54	49645	AMCGS
Staff Action Control Off	CPT L. A. PFLUKE	10S54	49659	AMCGS
Staff Action Control Off	VACANT	10S48	48588	AMCGS
Admin Officer	MRS P. J. BARNETT	10S45	49662	AMCGS-A

COMMAND SERGEANT MAJOR — AMCCSM

CSM W. B. TAPP, JR.	10E08	48257	AMCCSM

PROTOCOL OFFICE — AMCPR

Protocol Officer	MS E. BARRY	10S50	47853	AMCPR
Protocol Asst	MRS B. EARNEST	10S50	47853	AMCPR
Admin Protocol Asst	MRS P. MacCAFFRAY	10S50	47853	AMCPR

COMMANDER'S PERSONAL STAFF — AMCCG

XO	COL J. D. MILLER	10E08	49625	AMCCG
Admin Asst	CW3 J. R. KIDDER	10E14	49626	AMCCG
Secretary	MRS P. PAGACH	10E08	49626	AMCCG
Secretary	MRS J. RICHARDSON	10E08	49753	AMCCG
Sr. Log Advisor	MR G. COX	10C55	49630	AMCCG
Aide-de-camp	LTC R. BEAUCHAMP	10E08	49626	AMCCG

OFFICE OF DEPUTY CG FOR RESEARCH, DEVELOPMENT AND ACQUISITION — AMCDRA

Principal Asst Deputy for RDA	MR R. O. BLACK	10N06	49709	AMCDRA
Asst Deputy/Science & Technology	DR R. L. HALEY	10N12	49560	AMCDRA-ST
Asst Deputy for International Programs	MR B. R. DUNETZ	9W14	48367	AMCIP
Asst Deputy for Production	MR F. J. MICHEL	9N08	48298	AMCDRA-PD
Executive Off	LTC(P) W. B. HEGGIE, JR.	10N06	49710	AMCDRA
Asst Executive Off	LTC(P) R. J. LUNSFORD, JR.	10N06	49710	AMCDRA
Admin Off	MRS G. BARKER	10W12	48692	AMCRDA

DEPUTY FOR MANAGEMENT & ANALYSIS — AMCDMA

Deputy for Mgt & Analysis	MS M. B. ACTON	10E20	49640	AMCDMA
Executive Officer	COL C. H. MITCHELL	10E20	49640	AMCDMA
Chief Sys Assessment Prog Ofc	LTC(P) D. T. MORGAN	7W11	45102	AMCDMA-P

OFFICE OF MANAGEMENT & ANALYSIS — AMCDMA-M

Chief	COL H. L. HARRISON	4N24	48676	AMCDMA-M
Deputy Chief	MR R. G. SILVEY	4N24	48677	AMCDMA-M
Exec Officer	MAJ D. M. SHERIDAN	4N24	48874	AMCDMA-M
Admin Officer	MR R. D. INGRAM	4N09	48945	AMCDMA-M
Analysis Div	MR W. FERRON	7S28	49265	AMCDMA-MA
Res Eval Div	MR R. JAMESON	4S18	48848	AMCDMA-MR
Rev & Analysis Div	MR W. CHAVET	3N08	49170	AMCDMA-MM
Studies Mgt Div	MR R. VERBEKE	4N16	48038	AMCDMA-MS
Mission & Org Div	MR C. SCHIPP	4N17	49887	AMCDMA-MO
Tech Library	MR D. MONROE	7S35	48152	AMCDMA-ML

SPECIAL PROJECTS OFFICE FOR LHX/MSE — AMCSP

LHX	LTC R. BEAUCHAMP	10N54	47676	AMCSP-L
LHX	MR L. WERBER	10N54	47676	AMCSP-L
MSE	LTC A. A. SEVERINO	10N54	47676	AMCSP-M

DEPUTY CHIEF OF STAFF FOR SECURITY ASSISTANCE — AMCDS

Dep CofS	MG E. C. O'CONNOR	5E22	48380	AMCDS
Asst Dep CofS	MR P. DONOVAN	5E22	48383	AMCDS

HQ US ARMY SECURITY ASSISTANCE CENTER

Commander	MG E. C. O'CONNOR	5E22	48380	AMSAC
Deputy	MR P. DONOVAN	5E22	48383	AMSAC-M
Asst Deputy	MR R. L. LUM	5E22	48383	AMSAC-M
Chief of Staff	COL J. F. WADE	5E22	48384	AMSAC-S
SGS	VACANT	5E22	48384	AMSAC-SG
Aide-de-camp	1LT(P) W. J. PAGE	5E22	48380	AMSAC
Comptroller	MR C. H. KUDERNA	5E16	49688	AMSAC-R
Personnel and Admin Ofc	VACANT	5S56	48395	AMSAC-SA
Directorate for Program Mgt	COL W. J. EDWARDS	5S10	48371	AMSAC-MP
Directorate for Mideast/Africa	COL P. F. THOMPSON	5S22	48451	AMSAC-MM
Directorate for Europe	COL J. H. RICHARDS	5S54	48399	AMSAC-ME
Directorate for Asia/Pacific/Americas	COL R. A. UDICK	5N114	49895	AMSAC-MA
SA3 Project	MR D. R. MURTOMAKI	5S27	48468	AMSAC-D
Deputy for Operations	COL G. E. WILSON NCAD PA	AV 977-6800		AMSAC-O

DEPUTY CHIEF OF STAFF FOR SUPPLY, MAINTENANCE & TRANSPORTATION — AMCSM

Dep CofS	BG B. J. STALCUP	8S06	48175	AMCSM
Asst Dep CofS	MR A. D. MILLS	8S06	48007	AMCSM
Executive Officer	LTC J. DAVIDSON	8S06	48007	AMCSM-X
Asst Dep CofS for Support Operations	MS M. L. PINKETT	8N08	49785	AMCSM-S
Plans & Operations Div	MS M. L. PINKETT	8N08	49785	AMCSM-SO
Admin Officer	MR W. L. STEPHENS	8S09	49799	AMCSM-SOP
Personnel Officer	MS M. A. ARNOLD	8N21	49835	AMCSM-SOS
Automated Systems Intgrn Div	MR G. PELLED	7S11	49573	AMCSM-SA
MainInterservice Spt Mgt Div	MR L. W. BOEHM	5N25	49880	AMCSM-SI
Asst Dep CofS for Weapon Systems Mgt	VACANT	8W18	49801	AMCSM-W
Aviation & Missile Systems Div	COL G. E. LETHCOE	7N28	48806	AMCSM-WA
Cmd, Control, Surv & Spt Systems Div	MR G. CSERI	7S50	49840	AMCSM-WC
Ground Combat & Munitions Systems Div	MR J. C. HILL (Act)	7N16	45533	AMCSM-WG
Force Mod Integration Div	COL L. P. HORTON	7S16	49546	AMCSM-WI
Vehicle & Troop Spt Systems Div	LTC(P) D. C. WADE	7N38	48787	AMCSM-WS
Materiel Dist Mgt Div	COL H. L. BROOKS	8S44	49487	AMCSM-PD
Inventory Mgt Policy Div	COL D. R. SAARI	8W16	49801	AMCSM-PI
ILS & Maint Div	COL M. E. PERRY	8S28	48786	AMCSM-PL
Depot Operations Div	COL J. W. BEST	9S12	48245	AMCSM-PO

MISCELLANEOUS NUMBERS (See AMC-M 10-1 for Services not listed)

Ambulance	1S51	9/911	
(During Duty Hours-Call Clinic)		48296	
(After Duty Hours-Call Guard)		9-577-1144	
AMC Education Center	4S17	48484	ANPE-HRE-H
AMC Operations Center (SDO)	G2C60	48586	AMCOC
Audio Visual Aids	1N57	46914	AMCIM-OA
Automation Security Ofc	4N45	45588	AMXLS-LM
Battlefield Electromagnetic Environment Ofc	G1C02	48515	AMSTE-CT-CE
Bldg Admin, OSD	1S34	48099	OSD
Civilian Emp Health Svc (Clinic)	1S51	48296	
Civ Pers Ofc (R&P)	2S24	49446	AMCPE-CH-RP
Civ Pers Ofc (Tech Svcs) Processing & Info	2C33	49491	AMCPE-CH-TS
Classified Mailroom	G2W07	49585	AMCIM-OM
Conference Room Scheduling	1N57	48485	AMCIM-OA
Correspondence/Mail Distribution	G2W07	49597	AMCIM-OM
Credit Union	Lobby	48311	
Data Communications Services	G3C08	49000	ASNC-BHA-S
Driver Service	G1S01	48091	AMCEN-OT
Exec Dining Facility	10N53	49569	AMCGS-GM
Forms Management Officer, HQ	G3C25	48060	AMCIM-OD-F
Graphics	1N27	48491	AMCIM-OG
Graphics Self-Service	1C22	48481	AMCIM-OG
Guard Office	Lobby	9-557-1144	
Information Sys Mgt Br	G2C08	45258	AMCIM-OI
Learning Resource Center (LRC)	1S17	48214	AMCPE-TD-LRC
Library (Reference/Loan Publications)	7S35	45816	AMCDMA-ML
Library (Technical)	7S35	48152	AMCDMA-ML
Locator Service (Mil Pers)	1E06	48151	AMCPE-MH
Locator Service (Civ Pers)	2C33	49491	AMCPE-CH-TS
LSSA	4N26	48686	AMXLS-LM
Message Center	G3C20	49009	ASNC-BHA-O
Nurse	1S51	48296	
Parking Tickets/Towing (PMI)	Lobby	823-3255	
Photographic Facility	1C44	48486	USA-AVC
Postal Branch	G2W07	48693	AMCIM-OM
Printing Branch	G2C37	49603	AMCIM-OP
Protocol Ofc	10S50	47853	AMCPR
Publications Control Officer, HQ	G3C25	48158	AMCIM-OD-A
Editorial Section	G3C25	48060	AMCIM-OD-E
Publications/Blank Forms Stockroom	G3C19	49663	AMCIM-OD-S
Receptionist	Lobby	49191	
Reservations & Tickets (Official)	1E19	48108	USA-SCAF
Secure Voice Services	G3C20	49009	ASNC-BHA-O
Security Office, HQ	1N58	49141	AMCPE-SH
Special Security Command AMC	G2C63	48986	IASSG-AMC
Spell Memorial Conference Room	10N56	48988	AMCPR
Supply Stockroom (GSA)	G2C31	45885	DSS-W
Telecommunications Center (MSG)	G3C20	49009	ASNC-BHA-O
Telephone Communications Services	G3C08	49000	ASNC-BHA-S
Top Secret Repository	G2W09	49590	AMCAG-AH-R
Travel CONUS	1S50	49006	AMCAG-AH-T
Travel OCONUS	1S46	48116	AMCAG-AH-T
Unclassified Mailroom	G2W07	49595	AMCIM-OM
USA Equip Auth Rev Actv		AV356-2608	AMXEA-C
USA/SC Bush Hill	G3C08	48061	ASNC-BHA
Westwood Mgt Ofc (Bldg Mgt)	Lobby	751-5590	

DEPUTY CHIEF OF STAFF FOR RESOURCE MANAGEMENT — AMCRM

Dep CofS	MG R. B. ADAMS	3N58	49131	AMCRM
Asst Deputy CofS	MR M. C. SANDUSKY	3N58	49128	AMCRM
Executive Officer	COL C. SABIN	3N58	49130	AMCRM-X
Admin Officer	MRS M. M. ELBON	3N57	49120	AMCRM-A
Asst Dep CofS for Cost Analysis	MR R. O. WEIDENMULLER	3S34	49080	AMCRM-E
Cost Analysis Div	MR R. O. WEIDENMULLER	3S34	49080	AMCRM-E
Contract Cost Performance Div	COL C. B. McGEACHY	9S36	48319	AMCRM-K
Asst Dep CofS for Programs & Budget	MR H. C. PUSCHECK	4S22	48337	AMCRM-P
Program Integration Div	COL W. I. PARKS, JR.	4S30	49112	AMCRM-PI
Budget Div	MR E. J. HENLEY	3E10	49039	AMCRM-PB
HQ Budget Ofc	MR J. GOODWORTH	1S58	48442	AMCRM-PBH
Program Budget & Funding Policy Div	MR D. R. LOOMER	3S50	49110	AMCRM-PP
Procurement Execution & Stock Fund Div	COL P. F. BAUMANN	9S58	48347	AMCRM-??
Force Development Div	MR G. E. TAGTMEYER	2E08	48215	AMCRM-MF
HQ Manpower Ofc	MR J. McCUTCHEON	2N21	49365	AMCRM-MFH
Productivity Mgt Div	MR P. F. ROBERTS	3W06	48678	AMCRM-MP
Finance & Accounting Div	COL W. MIKKELSON	3N54	49231	AMCRM-F
Internal Review & Audit Compliance Div	MR M. G. ARTHUR	3S26	49020	AMCRM-I
Systems Management Div	MR A. F. ALLISON	3N54	45175	AMCRM-S
Programs & Projects Div	MS B. L. PATE (Act)	3N09	49079	AMCRM-Z
Deputy Career Program Manager	MS A. MORRIS	3N58	49211	AMCRM-D

DEPUTY CHIEF OF STAFF FOR PERSONNEL — AMCPE

Dep CofS	MG J. G. BOATNER	2E14	48195	AMCPE
Asst Dep CofS	MR A. GRIMMETT	2E14	48195	AMCPE
Exec Officer	LTC F. GRAUER	2E14	48195	AMCPE-X
Admin Officer	MRS L. PIERPOINT	2E18	48421	AMCPE-A
Civilian Personnel	MR K. MORRIS	2W20	49167	AMCPE-C
HQ CPO	MR R. BROOKS	2S24	49427	AMCPE-CH
Military Personnel	COL R. NITZSCHE	2S56	49325	AMCPE-M
HQ Mil Pers Ofc	CPT SMITH	1E06	48150	AMCPE-MH
Cmd Reenl Ofc	SGM MILLER	2S44	49103	AMCPE-ME
Adjutant General	COL D. WINKLER	1N12	48520	AMCAG
Provost Marshal	COL D. GARNER	10N44	49033	AMCPE-S
HQ Security Ofc	MS M. COSBY	1N58	49141	AMCPE-SH
Plans & Programs	VACANT	2C06	49474	AMCPE-P

DEPUTY CHIEF OF STAFF ENGINEER — AMCEN

Dep CofS	COL J. HUBBARD	5W12	49041	AMCEN
Asst Dep CofS	MR J. W. BOUCHER	5W12	49041	AMCEN
ADCS Engr & Housing	COL J. SIMONEAUX	5W06	49390	AMCEN-E
Facilities Div	MR W. PEARCE	5W06	49296	AMCEN-F
Housing Mgt Div	MR J. SLADE	5N10	48492	AMCEN-H
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